

## Kit components

Product TGFb2 Emax® ImmunoAssay System, 5 x 96wells

Product code G7600

<b>Substance number</b>	<b>Description</b>	<b>Amount</b>	<b>Symbols</b>
G127	TGFβ Coat mAb	1	-
G128	TGFβ Block 5X Buffer	1	-
G129	TGFβ Sample 10X Buffer	1	-
G341	Anti-TGFβ2 pAb	1	-
G349	TGFβ2 Standard	1	-
G743	TMB One Solution	2	-
G869	TGFB2 HRP Conjugate	1	-



**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** TGF $\beta$  Coat mAb

**Article number:** G127

**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGF $\beta$  Coat mAb**

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**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

\* **4 First aid measures**

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

\* **5 Firefighting measures**

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

\* **6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** No special measures required.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

\* **7 Handling and storage**

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGF $\beta$  Coat mAb

(Contd. of page 2)

## 8 Exposure controls/personal protection

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 6.8

**Change in condition**

<b>Melting point/Melting range:</b>	0°C (32 °F)
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

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USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGF $\beta$  Coat mAb

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

99.6 %

**Solids content:**

10.0 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water

USA

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# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ Coat mAb

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## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.  
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## \* 15 Regulatory information

Sara

**Section 355 (extremely hazardous substances):**

7647-01-0 | hydrogen chloride

**Section 313 (Specific toxic chemical listings):**

7647-01-0 | hydrogen chloride

**TSCA (Toxic Substances Control Act):**

7647-14-5 | sodium chloride

7647-01-0 | hydrogen chloride

7732-18-5 | water, pure

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

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USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGF $\beta$  Coat mAb**

(Contd. of page 5)

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Carcinogenicity categories**
**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

7647-01-0 | hydrogen chloride

3

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

7647-01-0 | hydrogen chloride

A4

26628-22-8 | sodium azide

A4

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:**
**Water hazard class:** Generally not hazardous for water.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.

USA



**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking****Product identifier****Trade name:** TGF $\beta$  Block 5X Buffer**Article number:** G128**Application of the substance / the preparation** Laboratory chemicals**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

1185-53-1	2-Amino-2-(hydroxymethyl)-1,3-propanediolhydrochloride	5-10%
77-86-1	2-Amino-2-(hydroxymethyl)-1,3-propanediol	<2.00%

**Additional information:** For the wording of the listed risk phrases refer to section 15.**3 Hazards identification****Classification of the substance or mixture****Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements****Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

(Contd. on page 2)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGFβ Block 5X Buffer**

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

## \* 4 First aid measures

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

## \* 5 Firefighting measures

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

## \* 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

## \* 7 Handling and storage

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGF $\beta$  Block 5X Buffer

(Contd. of page 2)

## 8 Exposure controls/personal protection

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 7.6

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ Block 5X Buffer

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

83.2 %

**Solids content:**

17.0 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential:** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ Block 5X Buffer

(Contd. of page 4)

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.  
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## \* 15 Regulatory information

Sara

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

1405-41-0 | Gentamycin Sulfate

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

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USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGFβ Block 5X Buffer**

(Contd. of page 5)

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:****Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

\* Data compared to the previous version altered.

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking****Product identifier****Trade name:** TGF $\beta$  Sample 10X Buffer**Article number:** G129**Application of the substance / the preparation** Laboratory chemicals**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.

1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300

For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients****Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

1185-53-1	2-Amino-2-(hydroxymethyl)-1,3-propanediolhydrochloride	10-15%
77-86-1	2-Amino-2-(hydroxymethyl)-1,3-propanediol	1.0-5.0%

**Additional information:** For the wording of the listed risk phrases refer to section 15.**3 Hazards identification****Classification of the substance or mixture****Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements****Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGF $\beta$  Sample 10X Buffer**

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

\* **4 First aid measures**

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

\* **5 Firefighting measures**

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

\* **6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

\* **7 Handling and storage**

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGF $\beta$  Sample 10X Buffer

(Contd. of page 2)

## 8 Exposure controls/personal protection

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 7.6

**Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGF $\beta$  Sample 10X Buffer

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

74.9 %

**Solids content:**

25.0 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ Sample 10X Buffer

(Contd. of page 4)

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.  
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## \* 15 Regulatory information

Sara

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

1405-41-0 | Gentamycin Sulfate

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

(Contd. on page 6)

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGF $\beta$  Sample 10X Buffer**

(Contd. of page 5)

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:****Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph:(608)274-4330

**\* Data compared to the previous version altered.**

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** Anti-TGFβ2 pAb

**Article number:** G341

**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: Anti-TGFβ2 pAb**

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

\* **4 First aid measures**

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

\* **5 Firefighting measures**

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

\* **6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** No special measures required.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

\* **7 Handling and storage**

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: Anti-TGF $\beta$ 2 pAb

(Contd. of page 2)

## 8 Exposure controls/personal protection

### Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

### Personal protective equipment:

#### General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

#### Protection of hands:

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

### General Information

#### Appearance:

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 7.3

#### Change in condition

<b>Melting point/Melting range:</b>	0°C (32 °F)
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

#### Ignition temperature:

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

#### Explosion limits:

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

<b>Density:</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: Anti-TGF $\beta$ 2 pAb

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

98.7 %

**Solids content:**

1.2 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential:** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water

USA

(Contd. on page 5)



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: Anti-TGFβ2 pAb

(Contd. of page 4)

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.  
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## \* 15 Regulatory information

Sara

### Section 355 (extremely hazardous substances):

None of the ingredients are listed.

### Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

### TSCA (Toxic Substances Control Act):

7647-14-5 sodium chloride

7558-79-4 disodium hydrogenorthophosphate

9048-46-8 Bovine Serum Albumin

7732-18-5 water, pure

### Proposition 65

#### Chemicals known to cause cancer:

1405-41-0 Gentamycin Sulfate

#### Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

#### Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: Anti-TGFβ2 pAb**

(Contd. of page 5)

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

10043-52-4 Calcium chloride

OEL

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:**

**Water hazard class:** Generally not hazardous for water.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** TGF $\beta$ 2 Standard

**Article number:** G349

**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGFβ2 Standard**

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

\* **4 First aid measures**

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

\* **5 Firefighting measures**

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

\* **6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** No special measures required.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

\* **7 Handling and storage**

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ2 Standard

(Contd. of page 2)

## 8 Exposure controls/personal protection

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 2.5

**Change in condition**

<b>Melting point/Melting range:</b>	0°C (32 °F)
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

**Density at 20°C (68 °F):** 0.999 g/cm<sup>3</sup> (8.337 lbs/gal)

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ2 Standard

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

99.9 %

**Solids content:**

0.2 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential:** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFβ2 Standard

(Contd. of page 4)

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations.  
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## \* 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## \* 15 Regulatory information

Sara

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGFβ2 Standard**

(Contd. of page 5)

### Carcinogenicity categories

#### EPA (Environmental Protection Agency)

None of the ingredients are listed.

#### IARC (International Agency for Research on Cancer)

7647-01-0 | hydrogen chloride

3

#### NTP (National Toxicology Program)

None of the ingredients are listed.

#### TLV (Threshold Limit Value established by ACGIH)

7647-01-0 | hydrogen chloride

A4

#### MAK (German Maximum Workplace Concentration)

None of the ingredients are listed.

#### NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

#### OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients are listed.

#### Product related hazard informations:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

#### National regulations:

**Water hazard class:** Generally not hazardous for water.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Department issuing MSDS:

Promega Corporation

Environmental Health and Safety Department

2800 Woods Hollow Road

Madison, WI

Ph: (608)274-4330

\* Data compared to the previous version altered.



**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** TMB One Solution

**Article number:** G743

**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300  
For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TMB One Solution**

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

\* **4 First aid measures**

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

\* **5 Firefighting measures**

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

\* **6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

\* **7 Handling and storage**

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TMB One Solution

(Contd. of page 2)

## 8 Exposure controls/personal protection

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 3.5

**Change in condition**

<b>Melting point/Melting range:</b>	0°C (32 °F)
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TMB One Solution

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

96.5 %

**Solids content:**

0.5 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TMB One Solution

(Contd. of page 4)

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

## 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

### Maritime transport IMDG:

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## 15 Regulatory information

Sara

### Section 355 (extremely hazardous substances):

None of the ingredients are listed.

### Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

### TSCA (Toxic Substances Control Act):

54827-17-7 3,3',5,5'-tetramethylbenzidine

7732-18-5 water, pure

### Proposition 65

#### Chemicals known to cause cancer:

None of the ingredients are listed.

#### Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

#### Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

#### Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

(Contd. on page 6)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TMB One Solution

(Contd. of page 5)

**Cancerogenity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

7722-84-1 hydrogen peroxide solution

3

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

7722-84-1 hydrogen peroxide solution

A3

**MAK (German Maximum Workplace Concentration)**

7722-84-1 hydrogen peroxide solution

4

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:**

Class	Share in %
Wasser	96.5
I	0.5

**Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Department issuing MSDS:**

Promega Corporation  
 Environmental Health and Safety Department  
 2800 Woods Hollow Road  
 Madison, WI  
 Ph: (608)274-4330

\* Data compared to the previous version altered.

USA

**Material Safety Data Sheet**  
*acc. to ISO/DIS 11014*

Printing date 03/08/2011

Reviewed on 03/08/2011

**1 Identification of the substance/mixture and of the company/undertaking**

**Product identifier**

**Trade name:** TGFB2 HRP Conjugate

**Article number:** G869

**Application of the substance / the preparation** Laboratory chemicals

**Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711

U.S.A.

1-800-356-9526 or (608)-274-4330

**Information department:** MSDS author: [Regulatory.Affairs@promega.com](mailto:Regulatory.Affairs@promega.com)

**Emergency telephone number:**

For Chemical Emergency ONLY (spill, leak, fire, exposure or accident), call CHEMTREC at 1-800-424-9300

For call originating outside the United States dial 001-703-527-3887

**2 Composition/information on ingredients**

**Chemical characterization:** Mixtures

**Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:** Void

**Additional information:** For the wording of the listed risk phrases refer to section 15.

**3 Hazards identification**

**Classification of the substance or mixture**

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Not applicable. Product has been classified as non-hazardous.

**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and is expanded upon by company and technical literature data.

**Label elements**

**Labelling according to EU guidelines:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

(Contd. on page 2)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGFB2 HRP Conjugate**

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 0

Fire = 0

Reactivity = 0

**OSHA Hazard Overview (Criteria according to 29CFR1910.1200):** Not applicable**Target Organ(s):** Not applicable or unknown

\* **4 First aid measures**

**General information:** No special measures required.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water.**After swallowing:** If symptoms persist consult doctor.

\* **5 Firefighting measures**

**Suitable extinguishing agents:**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**Special hazards arising from the substance or mixture** None known**Protective equipment:** No special measures required.

\* **6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.**Environmental precautions:** No special measures required.**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

**Reference to other sections**

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 13 for disposal information.

\* **7 Handling and storage**

**Handling:****Precautions for safe handling** No special measures required.**Information about protection against explosions and fires:** The product is not flammable.**Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s)** No further relevant information available.

USA

(Contd. on page 3)



# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: TGFB2 HRP Conjugate

(Contd. of page 2)

## 8 Exposure controls/personal protection

**Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.

**Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

**General Information**

**Appearance:**

<b>Form:</b>	Fluid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20°C (68 °F):** 7

**Change in condition**

<b>Melting point/Melting range:</b>	0°C (32 °F)
<b>Boiling point/Boiling range:</b>	100°C (212 °F)

**Flash point:** Not applicable.

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**

**Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

**Vapor pressure:** Not determined.

**Density:** Not determined.

**Relative density** Not determined.

**Vapour density** Not determined.

**Evaporation rate** Not determined.

(Contd. on page 4)

USA

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: **TGFB2 HRP Conjugate**

(Contd. of page 3)

**Solubility in / Miscibility with Water:**

Not miscible or difficult to mix.

**Segregation coefficient (n-octanol/water):** Not determined.

**Viscosity:**

**Dynamic:**

Not determined.

**Kinematic:**

Not determined.

**Solvent content:**

**Organic solvents:**

0.0 %

**Water:**

100.0 %

**Solids content:**

98.4 %

**Other information**

No further relevant information available.

## 10 Stability and reactivity

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

**Acute toxicity:**

**LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

## 12 Ecological information

**Aquatic toxicity:** Not harmful to the aquatic environment

**Persistence and degradability:** Not available

**Behavior in environmental systems:**

**Bioaccumulative potential:** Not known

**Ecotoxicological effects:**

**Remark:** Not available

**Additional ecological information:**

**General notes:** Generally not hazardous for water

USA

(Contd. on page 5)

# Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

Trade name: **TGFB2 HRP Conjugate**

(Contd. of page 4)

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

#### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

Contact Promega Safety Department for additional transportation information

**DOT regulations:** Not regulated

**Hazard class:** -

**Land transport ADR/RID (cross-border):** Not regulated

**ADR/RID class:** -

**UN-Number:** Not regulated

**Maritime transport IMDG:**

**IMDG Class:** -

**Marine pollutant:** No

**Air transport ICAO-TI and IATA-DGR:** Not regulated

**ICAO/IATA Class:** -

## 15 Regulatory information

Sara

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

1405-41-0 | Gentamycin Sulfate

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

(Contd. on page 6)

USA

**Material Safety Data Sheet**  
acc. to ISO/DIS 11014

Printing date 03/08/2011

Reviewed on 03/08/2011

**Trade name: TGFB2 HRP Conjugate**

(Contd. of page 5)

**Carcinogenicity categories****EPA (Environmental Protection Agency)**

None of the ingredients are listed.

**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

None of the ingredients are listed.

**TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

**MAK (German Maximum Workplace Concentration)**

None of the ingredients are listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**Product related hazard informations:**

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations according to directives on hazardous materials.

**National regulations:****Water hazard class:** Generally not hazardous for water.

\* **16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

**Department issuing MSDS:**

Promega Corporation

Environmental Health and Safety Department

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