

VivoGlo™ Caspase-3/7 Substrate (Z-DEVD-Aminoluciferin, Sodium Salt)

INSTRUCTIONS FOR USE OF PRODUCTS P1781 AND P1782.

Description

VivoGlo™ Caspase-3/7 Substrate^(a,b) is a firefly luciferase prosubstrate containing the DEVD tetrapeptide sequence recognized by caspase-3 and caspase-7 (Figure 1). Upon activation of caspase-3 or -7, the DEVD peptide is cleaved, and the liberated aminoluciferin reacts with luciferase to generate measurable light.

Cleavage has been shown with in cellulo (1) and in vivo (2–4) systems. For mice, activity of a related salt was demonstrated when 10mg of the substrate in 150µl of saline was injected intraperitoneally (2). However, other references (3,4) suggest that doses as low as 1.5mg per mouse (50mg/kg) can be used. We recommend conducting a preliminary dose-response study using no more than 500mg/kg.

All VivoGlo™ In Vivo Imaging Substrates are endotoxin tested for best performance and packaged for convenient dilution. The sodium salt has a minimum solubility of 500mg/ml in PBS, and the resulting solution is stable for at least 3 days at room temperature. Make up fresh solutions every day. Injection is usually done via the intraperitoneal route, and imaging is generally started 10 minutes after injection.

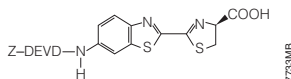


Figure 1. VivoGlo™ Caspase-3/7 Substrate showing the DEVD tetrapeptide sequence recognized by caspase-3 and caspase-7.

Product Contents and Storage Conditions

Formula (Free acid): C₃₇H₄₁N₇O₁₄S₂

Molecular Weight: 871.9g/mol.

Storage Conditions: Store the VivoGlo™ Caspase-3/7 Substrate (Z-DEVD-Aminoluciferin, Sodium Salt) at –20°C.

References

1. Liu, J.J. *et al.* (2005) *Cancer Biol. Ther.* **4**, 885–92.
2. Shah, K. *et al.* (2005) *Mol. Ther.* **11**, 926–31.
3. Kizaka-Kondoh, S. *et al.* (2009) *Clin. Cancer Res.* **15**, 3433–41.
4. Scabini, M. In vivo imaging of early stage apoptosis measuring real-time caspase-3 activation. Presentation at: 4th European Molecular Imaging Meeting; 2009 May 27–30; Barcelona, Spain.

Ordering and Technical Information

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