NanoBRET™ TE Intracellular Kinase Assay

NanoLuc®-IKBKE Fusion TE Assay

**Materials Needed**

<table>
<thead>
<tr>
<th>Cat. #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV1431</td>
<td>NanoLuc®-IKBKE Vector</td>
</tr>
<tr>
<td>N2500, N2501, or N2530 (1)</td>
<td>NanoBRET™ TE Intracellular Kinase Assay, K-5</td>
</tr>
</tbody>
</table>

**NanoBRET™ Tracer:** K-5 (1)

- 100X [Tracer]: 200µM in DMSO
- Final [Tracer]: 2µM
- Assay Category: High Window (2)
- \( Z' \): 0.57

**Materials Needed**

- Tracer affinity was measured by treating the cells with increasing concentrations of tracer in the presence or absence of a molar excess of unlabeled compound.
- **Bottom Right Panel:** The affinity of the unlabeled compound was measured at multiple fixed concentrations of the tracer, where the IC<sub>50</sub> at the recommended tracer concentration is depicted in orange (3).
NanoBRET™ TE Intracellular Kinase Assay

Notes:

1) NanoBRET™ Tracer K-5 is supplied within the NanoBRET™ TE Intracellular Kinase Assay, K-5 products (N2500, N2501, or N2530). Additional assay components are supplied within these kits, including the NanoBRET™ Nano-Glo® substrate, Extracellular NanoLuc® Inhibitor, tracer dilution buffer, and transfection carrier DNA. Additionally, BTK-NanoLuc® control vector is provided in products NV2500 and NV2501. For full details, please see the Promega website or technical manual for these products.

2) Assay category is defined by the assay window at the recommended tracer concentration. It is detailed in table 2 within the NanoBRET™ TE Intracellular Kinase Assay, K-5 technical manual.

3) See section 5 of NanoBRET™ TE Intracellular Kinase Assay, K-5 technical manual regarding approaches to improve quantitative analysis of test compound affinity.

4) NanoBRET™ TE Intracellular Assays have also been applied to Residence Time analysis. For a kinase example, please refer to Forster, M. et al. For an HDAC example please refer to Robers, M.B. et al.

References:

Robers, M.B. et al. (2015) Target engagement and drug residence time can be observed in living cells with BRET. Nature Comm. 6, 10091.


This protocol was developed by Promega Scientists and is intended for research use only.
Users are responsible for determining suitability of the protocol for their application.
Further information can be found in Technical Manual #TM520, available at: www.promega.com/protocols