



TrkA Positive Control  
Product Data Sheet

For Research Use Only, Not for use in diagnostic procedures

## TrkA Positive Control

(Human, recombinant protein expressed in Sf9)  
Cat# CY-E1091

Lot No.  
For 100 Assays  
(1 unit /  $\mu\text{L}$  x 100  $\mu\text{L}$ )

### Product Description:

Catalytic domain of human TrkA, corresponding to 474-796 a.a. containing a N-terminal GST tag and a C-terminal His tag, expressed in recombinant Baculovirus-infected sf9 cells. Purified by sequentially using GSH agarose and Ni-NTA agarose chromatography. The TrkA Positive control is designed to use for CycLex TrkA Kinase Assay/Inhibitor Screening Kit (Cat# CY-1091). The TrkA Positive Control should be added to the well at 1 unit/well. For instance, diluted positive control 1:10, use 10  $\mu\text{L}$  for 1 assay. Unused TrkA Positive Control should be stored at  $-70^{\circ}\text{C}$ .

**Product Size:** Recombinant TrkA: 100 units/100  $\mu\text{L}$

**Formulation:** The TrkA Positive Control is supplied frozen in a buffer containing 20mM Hepes-KOH (pH 7.5), 1 % BSA, 1mM EDTA, 2 mM DTT, 50mM NaCl, 0.03 % Brij35 and 50% glycerol.

**Source:** Human TrkA containing N-terminal GST-tag and C-terminal His tag, expressed in sf9 cells.

**Molecular Weight:** TrkA Positive Control demonstrates a single 64 kDa bands by SDS-PAGE analysis.

**Purity:** TrkA Positive Control is greater than 70 % pure as determined by SDS-PAGE analysis.

**Substrates:** TrkA phosphorylates poly[Glu, Tyr] 4:1 as an exogenous substrate.

**Inhibitors:** Specific TrkA inhibitor has not been discovered yet.

**Unit Definition:** One unit is defined as the amount of kinase required to incorporate 1 nmol of phosphate into the TrkA (autophosphorylation) under oligomerized/activated condition per 60 minute at  $30^{\circ}\text{C}$ .

**Assay Conditions:** Assay activity of TrkA in a 50  $\mu\text{L}$  reaction containing 20 mM Hepes KOH (pH 7.5), 4 mM  $\text{MgCl}_2$ , 2 mM  $\text{MnCl}_2$ , 1 mM DTT, 50  $\mu\text{M}$  [ $\gamma$ - $^{32}\text{P}$ ] ATP (1  $\mu\text{Ci}$ ), and 4  $\mu\text{g}$  of CycLex-"Tyrosine kinase-binding module". Start the reaction by adding 10 $\mu\text{L}$  of the enzyme, diluted 10-fold in a buffer containing 20 mM Hepes KOH (pH 7.5), 1 mM DTT, 0.03 % Brij35. Incubate for 60 minutes at  $30^{\circ}\text{C}$ . Terminate the reaction by adding 600  $\mu\text{L}$  of cold 10 % TCA solution containing 0.2 % Sodium pyrophosphate and stand on ice for 15 min. Filtrate acid insoluble material through GFC filters (Whatman Inc.), wash 4 times with 1 % TCA and rinse filters with ethanol. Dry filters and count in a liquid scintillation counter.

**Storage and Stability:** Stable for 12 months at  $-70^{\circ}\text{C}$  from date of shipment. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Aliquot enzyme to avoid repeated freezing and thawing.



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**Related Products:**

\* CycLex TrkA Kinase Assay/Inhibitor Screening Kit: Cat# CY-1091

**References:**

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2. Klein, R., Jing, S.Q., Nanduri, V., O'Rourke, E., and Barbacid, M. The trk proto-oncogene encodes a receptor for nerve growth factor. *Cell* **65**: 189-19, 1991.
3. Barbacid, M. The trk family of neurotrophin receptors. *J. Neurobiol.* **25**: 1386-1403, 1994.
4. Schneider R, Schweiger M. A novel modular mosaic of cell adhesion motifs in the extracellular domains of the neurogenic trk and trkB tyrosine kinase receptors. *Oncogene.* **6**:1807-11, 1991
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**PRODUCED BY**

CycLex Co., Ltd.  
1063-103 Terasawaoka  
Ina, Nagano 396-0002  
Japan  
Fax: +81-265-76-7618  
e-mail: [info@cyclex.co.jp](mailto:info@cyclex.co.jp)  
URL: <http://www.cyclex.co.jp>

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