

## EPHB3 (Human), Active

### Recombinant protein expressed in Sf9 cells

Cat# CY-SPE23

Lot No. Q306-1  
5 µg 0.1 µg/µl

#### Background:

EPHB3 is a member of the Ephrin receptor family and is expressed during embryonic development in multiple regions of the central nervous system. In adult brain, EPHB3 is expressed in the cerebellum, raphe pallidus, hippocampus, entorhinal cortex, and both motor and sensory cortices (1). EPHB3 is involved in the maintenance of mature neuronal connections and/or re-arrangement of synaptic connections during late stages of development. EPHB3 plays a role in the regulation of cell adhesion and migration, and the catalytic activity of EPHB3 is required for inhibition of integrin-mediated cell adhesion (2).

#### Product Description:

Recombinant human EPHB3 (585-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. The gene accession number is NM\_004443.

#### Gene Aliases:

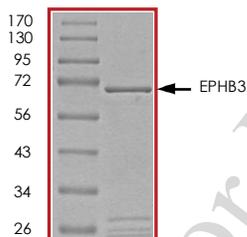
ETK2; HEK2; Cek10; Mdk5; TYRO6

#### Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

#### Purity & Molecular Weight:

The purity was determined to be >90% by densitometry. Approx. MW 68kDa.



#### Storage:

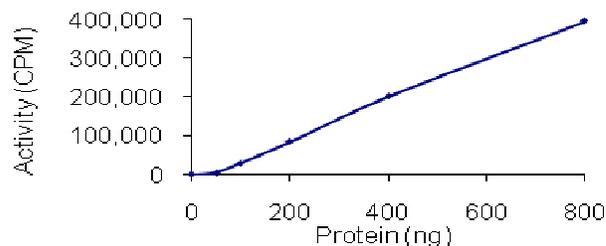
Store product at  $-70^{\circ}\text{C}$ . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

#### Stability:

1 year at  $-70^{\circ}\text{C}$  from date of shipment.

**Specific Activity:**

The specific activity was determined to be 26 nmol /min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25  $\mu$ L reaction consisting of 5  $\mu$ L of 5 X Kinase Assay Buffer, 5  $\mu$ L of 1 mg/ml the Substrate Solution, 10  $\mu$ L of diluted kinase and 5  $\mu$ L of 250  $\mu$ M ATP solution containing [ $\gamma$ - $^{32}$ P] ATP (0.167  $\mu$ Ci/ $\mu$ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20  $\mu$ L of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

**Substrate Solution:**

Poly (Glu:Tyr, 4:1) synthetic peptide substrate diluted in distilled H<sub>2</sub>O to a final concentration of 1 mg/ml.

**5 X Kinase Assay Buffer:**

25mM MOPS, pH 7.2, 12.5mM  $\beta$ -glycerol-phosphate, 20mM MgCl<sub>2</sub>, 12.5mM MnCl<sub>2</sub>, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

**References:**

1. Willson, CA. et al: EphB3 receptor and ligand expression in the adult rat brain. J Mol Histol. 2006 Nov;37(8-9):369-80.
2. Miao, H. et al: Inhibition of integrin-mediated cell adhesion but not directional cell migration requires catalytic activity of EphB3 receptor tyrosine kinase. Role of Rho family small GTPases. J Biol Chem. 2005 Jan 14;280(2):923-32.

**CycLex Co., Ltd**

1063-103 Tera-Sawaoka, Ina, Nagano, Japan 396-0002

Fax: 81-265-76-7618

e-mail: [info@cyclex.co.jp](mailto:info@cyclex.co.jp)

URL: <http://www.cyclex.co.jp>