Recombinant Mouse EphA8 Fc Chimera

Catalog Number: 454-A8

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived

Mouse EphA8 (Gly27 - Arg540) Accession # O09127	DIEGRMD	Human IgG_1 (Pro100 - Lys330)	6-His tag

N-terminus C-terminus

N-terminal Sequence Analysis Gly27

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 84.2 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 100-120 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
Immobilized Recombinant Mouse EphA8 Fc Chimera at 2 µg/mL (100 µL/well) can bind recombinant human Ephrin-A5 Fc Chimera with a linear range of
0.31-20 ng/mL.
Optimal dilutions should be determined by each laboratory for each application.

Endotoxin Level <0.01 EU per 1 µg of the protein by the LAL method.

Purity >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in MES, NaCl, PEG, CHAPS and Imidazole. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

EphA8, also known as Hek3 and Eek, is a 120 kDa glycosylated member of the Eph family of transmembrane receptor tyrosine kinases (1, 2). The A and B classes of Eph proteins are distinguished by Ephrin ligand binding preference but have a common structural organization. EphA4 binds and is activated by class A Ephrins but not class B Ephrins (3, 4). Eph-Ephrin interactions are widely involved in the regulation of cell migration, tissue morphogenesis, and cancer progression. The 514 amino acid (aa) extracellular domain (ECD) of mouse EphA8 contains an N-terminal Ephrin binding region, a cysteine-rich region, and two fibronectin type III domains (FnIII). The 442 aa cytoplasmic domain contains the tyrosine kinase domain and a sterile alpha motif (SAM) (3). Within the ECD, mouse EphA8 shares 97% and 99% aa sequence identity with human and rat EphA8, respectively. EphA8 is expressed in neurons in the mesencephalon of the developing brain, particularly in the rostral tectum and the superior colliculus (5 - 7). It is enriched at the tips of neurite processes and plays a role in projection of superior colliculus axons through the posterior commissure (6, 8). Its expression enhances neurite extension be means of a mechanism that does not require catalytic activity of the tyrosine kinase domain (9). Ephrin-mediated activation of the EphA8 kinase induces phosphorylation of tyrosine residues in the cytoplasmic domain, leading to association with signaling and scaffolding proteins and inhibition of cell-cell adhesion (4, 8, 10). Ligand binding can also promote the Integrin-mediated cellular adhesion to Fibronectin (11). This function, like the enhancement of neurite extension, does not require activation of the kinase domain (11).

References:

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