Recombinant Human EphA6 Fc Chimera

Catalog Number: 5606-A6

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived

N-terminal Sequence Analysis	Trp23
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	85.7 kDa (monomer)

SPECIFICATIONS

SDS-PAGE	95-110 kDa under reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When rhEphA6/Fc Chimera is immobilized at 2 µg/mL, 100 µL/well, it binds biotinylated rhEphrin-A3/Fc Chimera with a linear range of 0.31-20 ng/mL.
Endotoxin Level	<0.10 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 PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in 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

EphA6, also known as Ehk2 and Hek12, is a 110 kDa member of the transmembrane Eph receptor tyrosine kinase family. The A and B classes of Eph proteins are distinguished by Ephrin ligand binding preference but have a common structural organization. Eph-Ephrin interactions are widely involved in the regulation of cell migration, tissue morphogenesis, and cancer progression (1 - 3). The 527 amino acid (aa) extracellular domain (ECD) of human EphA6 contains an N-terminal Ephrin binding region, a cysteine-rich region, and two fibronectin type II domains. The 465 aa cytoplasmic domain contains the tyrosine kinase domain and a sterile alpha motif (SAM) (4, 5). Alternate splicing generates an isoform that consists of the transmembrane segment and a portion of the kinase domain. Within the ECD, human EphA6 shares 95% aa sequence identity with mouse and rat EphA6. EphA6 binds and is activated by all five of the Ephrin-A ligands (6). It is primarily expressed in the brain and testes with lesser amounts in the colon and inner ear (4, 5, 7). Within the developing brain, it is localized to deep layers of the posterior cortical plate (8, 9). In adult rodents, EphA6 is expressed on Purkinje cells, in the accessory olfactory bulb, and on vestibular ganglion neurons of the inner ear (10, 11). This pattern is complementary to the expression of its ligand, Ephrin-A5 (9, 11). EphA6 null mice exhibit defects in learning and memory formation (12). EphA6 expression in vascular endothelium of the genital tubercle is under the regulation of HOX13, and a lack of HOX13 leads to hypospadias in mice (13). EphA6 is downregulated in human colon and renal cancers (7).

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