Biotinylated Recombinant Human Ephrin-A5 Fc Chimera

Catalog Number: BT374

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived

Human Ephrin-A5 (Gln21 - Asn203) Accession # P52803	IEGRMD	Human IgG_1 (Pro100 - Lys330)	6-His tag

N-terminus C-terminus

N-terminal Sequence Analysis No results obtained: Gln21 predicted

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 48.6 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 50-55 kDa, reducing conditions

Activity Measured by its binding ability in a functional ELISA.
Immobilized recombinant mouse EphA3 Fc Chimera at 2 µg/mL (100 µL/well) can bind Biotinylated Recombinant Human Ephrin-A5 Fc Chimera with a linear range of 0.078-5 ng/mL.
Optimal dilutions should be determined by each laboratory for each application.

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

Formulation Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. 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

Ephrin-A5, also known as AL-1, RAGS, and LERK-7, is an approximately 25 kDa member of the Ephrin-A family of GPI-anchored ligands that bind and induce the tyrosine autophosphorylation of Eph receptors. Ephrin-A ligands are structurally related to the extracellular domains of the transmembrane Ephrin-B ligands. Eph-Ephrin interactions are widely involved in the regulation of cell migration, tissue morphogenesis, and cancer progression (1, 2). Ephrin-A5 preferentially interacts with receptors in the EphA family but also with EphB2 (3). Mature human Ephrin-A5 shares 99.5% aa sequence identity with mouse and rat Ephrin-A5, respectively (4). Ephrin-A5 is expressed in multiple tissues during development, particularly in the brain (5, 6). It can exert repulsive or attractive effects on migrating neurons in the developing brain and motor column of the spinal cord (6 - 10). Ephrin-A5 repels migrating axons by inducing growth cone collapse and neurite retraction and by inhibiting the neurotrophic effects of NGF and BDNF (3, 11, 12). It interacts *in cis* with EphA3 on retinal axon growth cones which reduces axonal sensitivity to Ephrin-A5 *in trans* (13). In the adult, Ephrin-A5 is expressed on hippocampal neurons and astrocytes and induces the development of hippocampal synapses (9, 14, 15). It supports the proliferation of neural progenitors and the survival of newly differentiated neurons (14). Ephrin-A5 also functions as a tumor suppressor (16). Its normal function in inhibiting EGFR signaling is compromised by its down-regulation in glioma (16). Ephrin-A5 is also expressed by muscle precursor cells and interacts with EphA4 to restrict their migration to the correct locations during forelimb morphogenesis (17).

References:

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