

Human Ephrin-A3 / EFNA3 / EFL2 Protein (Fc Tag)

Catalog Number: 10188-H02H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EFL2; Ehk1-L; EPLG3; LERK3

Protein Construction:

A DNA sequence encoding the human EphrinA3 (NP_004943.1) (Met 1-Ser 213) with the C-terminal propeptide removed was fused with the Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. Immobilized mouse EphA6 at 1 µg/ml (100 µl/well) can bind human EphrinA3 / Fc Chimera. The EC50 of human EphrinA3 is 299.2 ng/mL.
2. Loaded Recombinant Human Ephrin A3 Protein, hFc Tag (Cat. No. 10188-H02H) on ProA Biosensor, can bind Recombinant Human EphA6 Protein, His Tag (Cat. No. 16039-H08H) with an affinity constant of 43.1 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
3. Loaded Recombinant Human Ephrin A3 Protein, hFc Tag (Cat. No. 10188-H02H) on ProA Biosensor, can bind Recombinant Cynomolgus EPHA5 Protein, His Tag (Cat. No. 91049-C08H) with an affinity constant of 78.2 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
4. Loaded Recombinant Human Ephrin A3 Protein, hFc Tag (Cat. No. 10188-H02H) on ProA Biosensor, can bind Recombinant Human EPHA5 Protein, His Tag (Cat. No. 29795-H08H) with an affinity constant of 0.65 µM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 23

Molecular Mass:

The recombinant human EphrinA3/Fc is a disulfide-linked homodimer after removal of the signal peptide. The reduced monomer consists of 429 amino acids and has a predicted molecular mass of 48 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhEphrinA3/Fc monomer is approximately 60-65 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

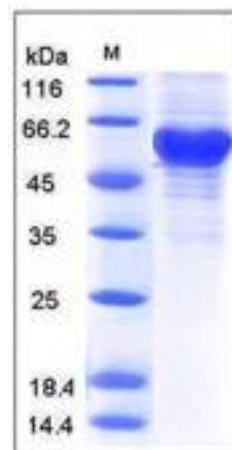
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Ephrin-A3 also known as EPH-related receptor tyrosine kinase ligand 3 or EFNA3, is a member of the ephrin family. The Eph family receptor interacting proteins (ephrins) are a family of proteins that serve as the ligands of the Eph receptor, which compose the largest known subfamily of receptor protein-tyrosine kinases (RTKs). Ephrin-A3 and their Eph family of receptor tyrosine kinases are expressed by cells of the SVZ. Ephrin subclasses are further distinguished by their mode of attachment to the plasma membrane: Ephrin-A3 ligands bind EphA receptors and are anchored to the plasma membrane via a glycosylphosphatidylinositol (GPI) linkage, whereas ephrin-B ligands bind EphB receptors and are anchored via a transmembrane domain. Ephrin-A3 expressed on astrocytes activates EphA4 on the post-synaptic neuron and restricts the growth of dendritic spines through multiple pathways.

References

1. Klein R. (2009) Bidirectional modulation of synaptic functions by Eph/ephrin signaling. *Nat Neurosci.* 12(1): 15-20.
2. Lai KO, et al. (2009) Synapse development and plasticity: roles of ephrin/Eph receptor signaling. *Curr Opin Neurobiol.* 19(3): 275-83.
3. Prevost N, et al. (2002) Interactions between Eph kinases and ephrins provide a mechanism to support platelet aggregation once cell-to-cell contact has occurred. *Proc Natl Acad Sci U S A.* 99(14): 9219-24.

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