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Product Information

Ephrin-A3 /Fc Chimera

Recombinant Human
Expressed in NSO cells

Product Number **E0278**
Storage Temperature -20°C

Synonyms: Ehk1-L; EFL-2; LERK-3

Product Description

Recombinant Human Ephrin-A3/Fc Chimera consists of amino acid residues 1-209 of the extracellular domain of human Ephrin-A3¹ fused by means of a polypeptide linker to the Fc portion of human IgG₁, that is histidine-tagged at the C-terminus. The chimeric protein is expressed in a mouse myeloma cell line, NSO. Recombinant Ephrin A3 is a disulfide-linked homodimer. The amino terminus in Asn(31) determined by N-terminal sequencing. The calculated molecular mass of the reduced protein is 47.7 kDa, but as a result of glycosylation, recombinant Ephrin-A3/Fc migrates as an approximately 90 kDa protein on reducing SDS-PAGE.

The Ephrin ligand family, of which Ephrin-A3 is a member, binds members of the Eph receptor family. All ligands share a conserved extracellular sequence, thought to correspond to the receptor binding domain. The conserved sequence contains approximately 125 amino acids including four invariant cysteines. A-class ligands have a GPI anchor after the conserved sequence. Ephrin-A3 can bind EphA2, EphA3, EphA4, EphA5, EphA6, EphA7, EphA8, and EphB1.^{2,3} Human and mouse Ephrin-A3 extracellular domains share approximately 96% homology. Only membrane-bound or Fc-clustered ligands have been shown to activate the receptor *in vitro*. Soluble monomeric ligands can bind the receptor, but do not induce receptor autophosphorylation and activation.² The ligands and receptors display reciprocal expression *in vivo*.³

Nearly all Ephrin-related receptors and ligands have been found to be expressed in developing and adult neural tissue.³ The Eph/Ephrin families may also play a role in angiogenesis.³

Reagents

Recombinant Human Ephrin-A3/Fc Chimera is supplied

as approximately 200 μg of protein lyophilized from a sterile-filtered phosphate-buffered saline (PBS) solution.

Preparation Instructions

Reconstitute the vial contents with sterile PBS. Stock solution concentration should be no less than 100 $\mu\text{g}/\text{ml}$.

Storage/Stability

Lyophilized samples are stable for greater than six months at -20°C . Upon reconstitution, store at $2-4^{\circ}\text{C}$ for up to one month. For extended storage, store in working aliquots at -20°C . Repeated freeze-thaw cycles should be avoided. Do not store in a frost-free freezer.

Product Profile

Activity is measured by its ability to compete with biotinylated human Ephrin-A3/Fc for binding to immobilized mouse Eph-A6/Fc (Product No. E 8527) in an ELISA assay.

Identity of Ephrin-A3/Fc was determined by western blot.

Purity: >90% by SDS-PAGE, visualized by silver stain.

Endotoxin level: < 0.1 EU (endotoxin units) per 1 μg of protein as determined by the LAL (Limulus amoebocyte lysate) method.

References

1. Kozlosky, C., et al., Ligands for the receptor tyrosine kinases hek and elk: isolation of cDNAs encoding a family of proteins. *Oncogene*, **10**, 299-306 (1995).
2. Flanagan, J.G. and P. Vanderhaegen, The ephrins and Eph receptors in neural development. *Annu. Rev. Neurosci.*, **21**, 309-345 (1998)
3. Pasquale, E.B., The Eph family of receptors. *Curr. Opin. Cell Biol.*, **9**, 608-615 (1997)

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