

Product Information

EPHRIN-A4 EXTRACELLULAR DOMAIN/FC CHIMERA

Human, Recombinant
Expressed in NSO mouse myeloma cells

Product Number **E 0403**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: LERK-4; EFL-4

Product Description

Recombinant human Ephrin-A4 extracellular domain/Fc chimera consists of amino acid residues 1-171 (extracellular domain of human Ephrin-A4)¹ that was fused by means of a polypeptide linker to the Fc portion of human IgG₁ that is 6X histidine-tagged at the carboxyl terminus. The chimeric protein is expressed in a mouse myeloma cell line, NSO. Recombinant Ephrin A4 is a disulfide-linked homodimer. The amino terminus is Leu 26 determined by N-terminal sequencing. The calculated molecular mass of the reduced protein is approximately 43.7 kDa, but as a result of glycosylation, the recombinant Ephrin-A4/Fc migrates as an approximately 50 kDa protein on reducing SDS-PAGE.

The Ephrin ligand family, of which Ephrin-A4 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-A4 can bind EphA2, EphA3, EphA4, EphA5, EphA6, EphA7, and EphB1.^{2,3} Human and mouse Ephrin-A4 extracellular domains share approximately 80% 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 express in developing and adult neural tissue.³ The Eph/Ephrin families may also play a role in angiogenesis.³

Reagents

Recombinant human Ephrin-A4 extracellular domain/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 $-20\text{ }^{\circ}\text{C}$. Upon reconstitution, store at $2-4\text{ }^{\circ}\text{C}$ for up to one month. For extended storage, store in working aliquots at $-20\text{ }^{\circ}\text{C}$. Repeated freeze-thaw cycles should be avoided. Do not store in frost-free freezer.

Product Profile

Identity of Ephrin-A4/Fc was determined by western blot.

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

Endotoxin level: < 0.1 ng/ 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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