

Product Information

Ephrin-A2/Fc Chimera

Recombinant Mouse
Expressed in NSO cells

Product Number **E 0153**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonyms: ELF-1; Cek7-L; LERK-6

Product Description

Recombinant Mouse Ephrin-A2/Fc Chimera consists of amino acid residues 1-184 of the extracellular domain of mouse Ephrin-A2¹ 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 A2 is a disulfide-linked homodimer. The amino-terminus is Glu(23) determined by N-terminal sequencing. The calculated molecular mass of the reduced protein is approximately 46 kDa, but as a result of glycosylation, recombinant Ephrin-A2/Fc migrates as an approximately 57 kDa protein in SDS-PAGE under reducing conditions.

The ephrin ligand family, of which ephrin-A2 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-A2 can bind EphA2, EphA3, EphA4, EphA5, EphA6, EphA7, and EphA8.^{2,3} Human and mouse ephrin-A2 extracellular domains share approximately 93% 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 ephrin ligands and Eph 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

Reagent

Recombinant Mouse Ephrin-A2/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

Store lyophilized samples at $-20\text{ }^{\circ}\text{C}$. Upon reconstitution, store at 2-8 $^{\circ}\text{C}$ 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

Measured by its ability to bind recombinant rat EphA5/Fc immobilized at 1 $\mu\text{l}/\text{ml}$ in an ELISA assay. The linear range of the assay is 0.16-10 ng/ml .

Each laboratory should determine optimal dilutions for each application.

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

Endotoxin level: < 0.1 $\text{ng}/\mu\text{g}$ of the cytokine as determined by the LAL (Limulus amebodyte) method.

References

1. Shao H, et al., cDNA cloning and characterization of a Cek7 receptor protein-tyrosine kinase ligand that is identical to the ligand (ELF-1) for the Mek-4 and Sek receptor protein-tyrosine J. Biol. Chem., **270**, 3467-3470 (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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