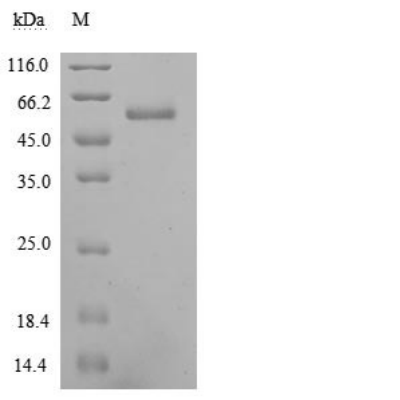
Recombinant Human Ephrin-A5 (EFNA5) (Active)

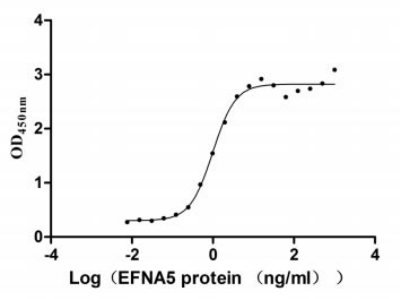
Product Code	CSB-MP007464HU
Relevance	Cell surface GPI-bound ligand for Eph receptors, a family of receptor tyrosine kinases which are crucial for migration, repulsion and adhesion during neuronal, vascular and epithelial development. Binds promiscuously Eph receptors residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Induces compartmentalized signaling within a caveolae-like membrane microdomain when bound to the extracellular domain of its cognate receptor. This signaling event requires the activity of the Fyn tyrosine kinase. Activates the EPHA3 receptor to regulate cell-cell adhesion and cytoskeletal organization. With the receptor EPHA2 may regulate lens fiber cells shape and interactions and be important for lens transparency maintenance. May function actively to stimulate axon fasciculation. The interaction of EFNA5 with EPHA5 also mediates communication between pancreatic islet cells to regulate glucose-stimulated insulin secretion. Cognate/functional ligand for EPHA7, their interaction regulates brain development modulating cell-cell adhesion and repulsion.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P52803
Storage Buffer	Lyophilized from a 0.2 μm filtered PBS, 6% Trehalose, pH 7.4
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	①Measured by its binding ability in a functional ELISA. Immobilized EPHA3(CSB-MP007723HU) at 2 μg/ml can bind human EFNA5, the EC50 of human EFNA5 protein is 0.8674-1.119 ng/ml. ②Human EPHA3 protein his tag (CSB-MP007723HU) captured on COOH chip can bind Human EFNA5 protein Fc tag (CSB-MP007464HU) with an affinity constant of 13.8 nM as detected by LSPR Assay.
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	QDPGSKAVADRYAVYWNSSNPRFQRGDYHIDVCINDYLDVFCPHYEDSVPED KTERYVLYMVNFDGYSACDHTSKGFKRWECNRPHSPNGPLKFSEKFQLFTPF SLGFEFRPGREYFYISSAIPDNGRRSCLKLKVFVRPTNSCMKTIGVHDRVFDVN DKVENSLEPADDTVHESAEPSRGEN
Research Area	Cancer
Source	Mammalian cell
Gene Names	EFNA5

Expression Region	21-203aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal hFc-tagged
Mol. Weight	50.1 kDa
Protein Description	Full Length of Mature Protein

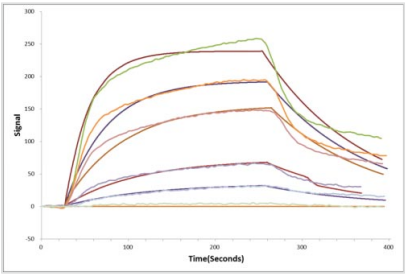
Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized EPHA3(CSB-MP007723HU) at 2 μg/ml can bind human EFNA5, the EC_{50} of human EFNA5 protein is 0.8674-1.119 ng/ml.



Activity
Human EPHA3 protein his tag (CSB-MP007723HU) captured on COOH chip can bind Human EFNA5 protein Fc tag (CSB-MP007464HU) with an affinity constant of 13.8 nM as detected by LSPR Assay.

Description

This Recombinant Human Ephrin-A5 (EFNA5) is expressed at the full length of the mature protein in mammalian cells, which corresponds to the 21-203aa region of human EFNA5. The protein has a TEV-linker and an immunoglobulin Fc domain fused on the C-terminus, with a molecular weight of 50.1 kDa. This protein product has a purity higher than 90%, as determined by SDS-PAGE. In the LSPR assay, it has an affinity constant of 13.8 nM against human EPHA3 protein. Also, the recombinant EFNA5 has an EC_{50} of 0.8674-1.119 ng/ml for binding to EPHA3, as determined by ELISA binding assay. The final product contains low endotoxin, with less than 1.0 EU/μg as determined by the LAL method. The EFNA5 is a promiscuous cell surface GPI-bound ligand that

	permits the cellular adhesion and contact-dependent directional signaling. The function of EFNA5 is vital for the nervous system development via axion fasciculation and the reorganization of the cytoskeleton. This product can be used in cancer research as cell adhesion reagent, ELISA reagent, and control for novel ligands for the associated ephrin receptor.
Endotoxin	Less than 1.0 EU/ug as determined by LAL method.