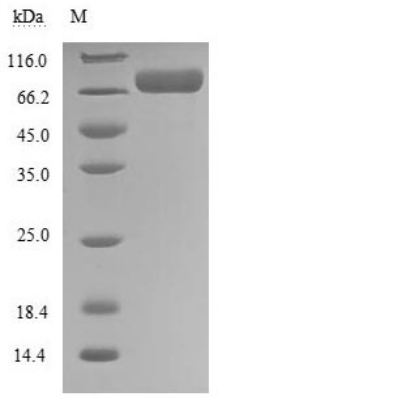
Recombinant Human Ephrin type-A receptor 3 (EPHA3), partial (Active)

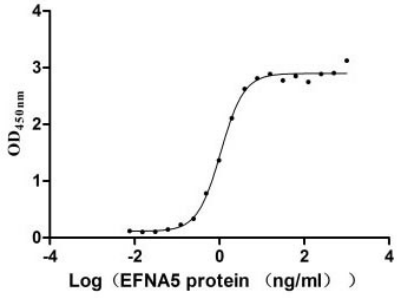
Product Code	CSB-MP007723HU
Relevance	Receptor tyrosine kinase which binds promiscuously membrane-bound ephrin family ligands residing on adjacent cells, leading to contact-dependent bidirectional signaling into neighboring cells. The signaling pathway downstream of the receptor is referred to as forward signaling while the signaling pathway downstream of the ephrin ligand is referred to as reverse signaling. Highly promiscuous for ephrin-A ligands it binds preferentially EFNA5. Upon activation by EFNA5 regulates cell-cell adhesion, cytoskeletal organization and cell migration. Plays a role in cardiac cells migration and differentiation and regulates the formation of the atrioventricular canal and septum during development probably through activation by EFNA1. Involved in the retinotectal mapping of neurons. May also control the segregation but not the guidance of motor and sensory axons during neuromuscular circuit development.
Abbreviation	Recombinant Human EPHA3 protein, partial (Active)
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.	P29320
Storage Buffer	Lyophilized from a 0.2 μm filtered 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	①Measured by its binding ability in a functional ELISA. Immobilized EPHA3 at 2 μg/ml can bind human EFNA5(CSB-MP007464HU), the EC50 of the protein is 0.9734-1.179 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 95% as determined by SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Sequence	ELIPQPSNEVNLLDSKTIQGELGWISYPSHGWEEISGVDEHYTPIRTYQVCNVM DHSQNNWLRTNWVPRNSAQKIYVELKFTLRDCNSIPLVLGTCKETFNLYYMES DDDHGVKFREHQFTKIDTIAADESFTQMDLGDRILKLNTEIREVGPVNKKGFYL AFQDVGACVALVSVRVYFKKCPFTVKNLAMFPDTVPMDSQSLVEVRGSCVNN SKEEDPPRMYCSTEGEWLVPIGKCSCNAGYEERGFMCQACRPGFYKALDGN MKCAKCPPHSSTQEDGSMNCRCENNYFRADKDPPSMACTRPPSSPRNVISNI NETSVILDWSWPLDTGGRKDVTFNIICKKCGWNIKQCEPCSPNVRFLPRQFGL TNTTVTVTDLLAHTNYTFEIDAVNGVSELSSPPRQFAAVSITTNQAAPSPVLTIK KDRTSRNSISLSWQEPEHPNGIILDYEVKYYEKQEQETSYTILRARGTNVTISSL

	KPDTIYVFQIRARTAAGYGTNSRKFEFETSPDSFSISGESSQ
Research Area	Cancer
Source	Mammalian cell
Target Names	EPHA3
Expression Region	21-541aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 6xHis-tagged
Mol. Weight	61.0 kDa
Protein Length	Partial

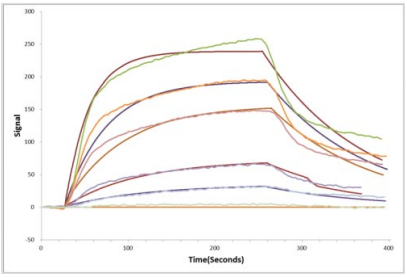
Image



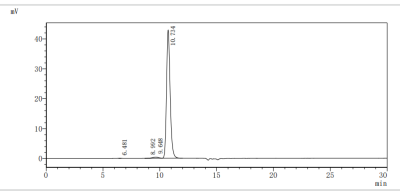
(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized EPHA3 at 2 μg/ml can bind human EFNA5(CSB-MP007464HU), the EC_{50} of the protein is 0.9734-1.179 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.



The purity of Human EPHA3 was greater than 95% as determined by SEC-HPLC

Description	The Human Ephrin Type-A receptor 3 (EPHA3) is a membrane tyrosine kinase receptor that promiscuously binds to ephrin family ligands. EPHA3 participates in migration and cell adhesion processes, thus mediating in the mesenchymal transition and the focal adhesion assembly. So it's a known oncogene for colorectal cancer. This recombinant protein is expressed in mammalian cells and fused with a 6xHis-tag on the C-terminus. The expressed region is the 21-541aa of the human EPHA3 protein, with a molecular weight of 61 kDa. The purity of the final product is higher than 95%, as determined by SDS-PAGE. The biophysical parameters of this recombinant protein were tested with ELISA and LSPR. In the functional ELISA, this recombinant protein has an EC50 of 0.9734-1.179 ng/ml for the binding with human EFNA5. LSPR determines the affinity constant for the binding with human EFNA5 is 13.8 nM. This protein product can be used in ELISA and Surface Plasmon Resonance to determine the presence and concentrations of their ligands in the sample and as a control for ligand binding assays. It also can be used as an immunogen to immunize the rabbit or other animals to get corresponding antibodies and is applied to immunological studies related to immune response pathways. The final product has low levels of endotoxin, with less than 1.0 EU/μg as determined by the LAL method.
Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Shelf Life	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.