Recombinant EPHA4 (570-986) protein

Catalog No: 81494, 81594
Expressed In: Baculovirus

Quantity: 20, 1000 µg
Concentration: 0.2 µg/µl
Source: Human

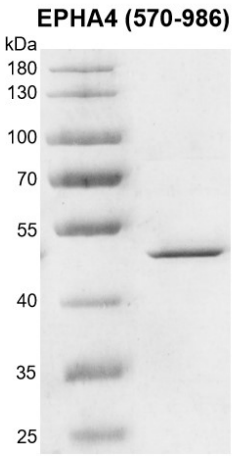
Buffer Contents: Recombinant EPHA4 (570-986) protein is supplied in 25 mM HEPES pH 7.5, 300 mM NaCl, 20% glycerol, 0.04% Triton X-100, 0.5 mM TCEP.

Background: EPHA4 (Ephrin type-A receptor 4) is a receptor tyrosine kinase which binds 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, it has the unique property among Eph receptors to bind and to be physiologically activated by both GPI-anchored ephrin-A and transmembrane ephrin-B ligands including EFNA1 and EFNB3. Upon activation by ephrin ligands, modulates cell morphology and integrin-dependent cell adhesion through regulation of the Rac, Rap and Rho GTPases activity. Plays an important role in the development of the nervous system controlling different steps of axonal guidance including the establishment of the corticospinal projections. May also control the segregation of motor and sensory axons during neuromuscular circuit development. In addition to its role in axonal guidance plays a role in synaptic plasticity. Activated by EFNA1 phosphorylates CDK5 at 'Tyr-15' which in turn phosphorylates NGEF regulating RHOA and dendritic spine morphogenesis. In the nervous system, also plays a role in repair after injury preventing axonal regeneration and in angiogenesis playing a role in central nervous system vascular formation.

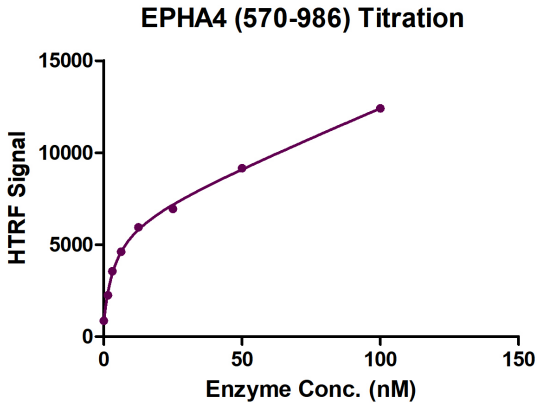
Protein Details: Recombinant EPHA4 (570-986) protein that includes amino acids 570-986 of human EPHA4 protein (accession number NP_001291465.1) was expressed in a baculovirus expression system and contains an N-terminal FLAG tag. The molecular weight of the protein is 48.46 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

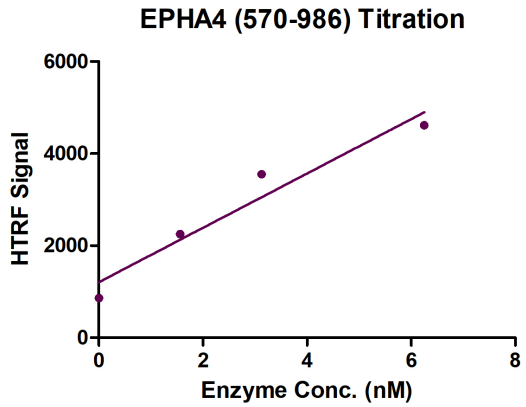
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.



Recombinant EPHA4 (570-986) protein gel.
10% SDS-PAGE gel stained with Coomassie Blue.
MW: 48.46 kDa
Purity: >95%



HTRF assay for EPHA4 (570-986) activity
1 µM TK substrate was incubated with different concentrations of EPHA4 (570-986) protein in a 10 µl reaction system containing 1×Enzymatic Buffer, 5 mM MgCl2,1mM MnCl2, 1 mM DTT, 5nM SEB and 100 µM ATP for 1 hour. Then 10 µl detection reagents containing anti-TK antibody (1:2) and SA-XL665 (1:100) diluted with 1× Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



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