

Recombinant Mouse EPHA2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51553

Size: 10ug, 100ug

Protein Name: Ephrin type-A receptor 2 (EC 2.7.10.1) (Epithelial cell kinase) (Tyrosine-protein kinase receptor ECK) (Tyrosine-protein kinase receptor MPK-5) (Tyrosine-protein kinase receptor SEK-2)

Synonym: Epha2, Eck, Myk2, Sek2

UniProt ID: Q03145

UniProt Link: www.uniprot.org/uniprotkb/Q03145/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 977 AA

Molecular Weight: 109 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MELRAVGFCALLWGCALAAAAAQGKEVVLLDFAAMKGELGWLTHPYGKGWDLMQNIMDDMPIYM
YSVCNVVSGDQDNWLRTNWWYREEAERIFIELKFTVRDCNSFPGGASSCKETFNLYYAESDVDYGT
NFQKRQFTKIDTIAPDEITVSSDFEARNVKLNVEERMVGPLTRKGFYLAQDIGACVALLSVRVYYKK
CPEMLQSLARFPETIAVAVSDTQPLATVAGTCVDHAVVPYGGEGPLMHCTVDGEWLVPIGQCLCQE
GYEKVEDACRACSPGFFKSEASESPCLECPEHTLPSTEGATSCQCEEGYFRAPEDPLSMSCTRPPS
APNYLTAIGMGAKVELRWTPAKDTGGRQDIVSVTCEQCWPESGECGPCEASVRYSEPPHALTRT
SVTVSDLEPHMNYTFAVEARNGVSGLVTSRSFRTASVSINQTEPPKVRLEDRSTTSLSVTWSIPVSQ
QSRVWKYEVTYRKKGDANSYNVRRTGFSVTLDDLAPDTTYLVQVQALTQEGQGAGSKVHEFQTL
STEGSANMAVIGGVAVGVVLLLVLAGVGLFIHRRRRNLRARQSSDVRFSKSEQLKPLKTYVDPHTY
EDPNQAVLKFTTEIHPSCVARQKVIGAGEFGEVYKGTLKASSGKKEIPVAIKTLKAGYTEKQRVDFLS
EASIMGQFSHHNIIRLEGVVSKYKPMMIITEYMENGALDKFLREKDGESVLQLVGMLRGIASGMKYL
ANMNYVHRDLAARNILVNSNLVCKVSDFGLSRVLEDDPEATYTTSGGKIPIRWTAPEAISYRKFTSAS
DVWSYGIVMWEVMTYGERPYWELSNHEVMKAINDGFRLLPTPMDPCSAIYQLMMQCWQQERSRRP
KFADIVSILDKLIRAPDSLKTADFDPVRSIRLPSTSGSEGVFPRTVSEWLESIKMQQYTEHFMVAGYT
AIEKVVQMSNEDIKRIGVRLPGHQKRIAYSLLGLKDQVNTVGIP

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Ephrin type-A receptor 2 (EC 2.7.10.1) (Epithelial cell kinase) (Tyrosine-protein kinase receptor ECK) (Tyrosine-protein kinase receptor MPK-5) (Tyrosine-protein kinase receptor SEK-2) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Receptor tyrosine kinase which binds promiscuously membrane-bound ephrin-A 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. Activated by the ligand ephrin-A1/EFNA1 regulates migration, integrin-mediated adhesion, proliferation and differentiation of cells (PubMed:29749928). Regulates cell adhesion and differentiation through DSG1/desmoglein-1 and inhibition of the ERK1/ERK2 signaling pathway. May also participate in UV radiation-induced apoptosis and have a ligand-independent stimulatory effect on chemotactic cell migration. During development, may function in distinctive aspects of pattern formation and subsequently in development of several fetal tissues. Involved for instance in angiogenesis, in early hindbrain development and epithelial proliferation and branching morphogenesis during mammary gland development. Engaged by the ligand ephrin-A5/EFNA5 may regulate lens fiber cells shape and interactions and be important for lens transparency development and maintenance. With ephrin-A2/EFNA2 may play a role in bone remodeling through regulation of osteoclastogenesis and osteoblastogenesis.

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein . Cell projection, ruffle membrane ; Single-pass type I membrane protein . Cell projection, lamellipodium membrane ; Single-pass type I membrane protein . Cell junction, focal adhesion . Note=Present at regions of cell-cell contacts but also at the leading edge of migrating cells. Relocates from the plasma membrane to the cytoplasmic and perinuclear regions in cancer cells.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.