

Recombinant Human EPHB2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50281

Size: 10ug, 100ug

Protein Name: Ephrin type-B receptor 2 (EC 2.7.10.1) (Developmentally-regulated Eph-related tyrosine kinase) (ELK-related tyrosine kinase) (EPH tyrosine kinase 3) (EPH-like kinase 5) (EK5) (hEK5) (Renal carcinoma antigen NY-REN-47) (Tyrosine-protein kinase TYRO5) (Tyrosine-protein kinase receptor EPH-3) [Cleaved into: EphB2/CTF1; EphB2/CTF2]

Synonym: EPHB2, DRT, EPHT3, EPTH3, ERK, HEK5, TYRO5

UniProt ID: P29323

UniProt Link: www.uniprot.org/uniprotkb/P29323/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 1055 AA

Molecular Weight: 117 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MALRRLGAALLLLPLLAAVEETLMDSTTATAELGWMVHPPSGWEEVSGYDENMNTIRTYQVCNVFE
SSQNNWLRTKFIARRGAHRIHVEMKFSVRDCSSIPSVPGSCKETFNLYYYEADFDSATKTFPNWME
NPWVKVDIAADESFSQVDLGGRVMKINTEVRSFGPVSRSGFYLAQDYGGCMSLIAVRVFYRKCP
RIIQNGAIFQETLSGAESTSLVAARGSCIANAEVDPKLYCNGDGEWLVPPIGRMCKAGFEAVENG
TVCRGCPSTGTFKANQGDEACTHCPINSRTTSEGATNCVCRNGYYRADLDPLDMPCTTIPSAPQAVIS
SVNETSLMLEWTPPRDSGGREDLVYNIICKSCGSGRGACTRCGDNVQYAPRQLGLTEPRIYISDLLA
HTQYTFEIQAVNGVTDQSPFSPQFASVNITTNQAAPSAVSIMHQVSRTVDSITLSWSQPDQPNGVILD
YELQYYEKELSEYNATAIKSPTNTVTQGLKAGAIYVFQVRARTVAGYGRYSGKMYFQTMTEAEYQT
SIQEKPLIIGSSAAGLVFLIAVVVIAIVCNRRGFERADSEYTDKLQHYTSGHMTPGMKIYIDPFTYEDP
NEAVREFAKEIDISCVKIEQVIGAGEFGEVCSGHLKLPKREIFVAIKTLKSGYTEKQRRDFLSEASIM
GQFDHPNVIIHLEGVVTKSTPVMITEFMENGSLDSFLRQNDGQFTVIQLVGMLRGIAAGMKYLADMN
YVHRDLAARNILVNSNLVCKVSDFGLSRFLEDDTSDPTYTSALGGKIPIRWTAPEAIQYRKFTSASDV
WSYGIVMWEVMSYGERPYWDMTNQDVINAIEQDYRLPPPMDCPSALHQLMLDCWQKDRNHRPKF
GQIVNTLDKMIRNPNSLKAMAPLSSGINLPLDRTIPDYTSFNTVDEWLEAIKMGQYKESFANAGFTS
FDVVSQMMMEDILRVGVTLAGHQKKILNSIQVMRAQMNIQSVESGQPLARRPRATGRTRKRCQPRDV
TKKTCNSNDGKKKGMGKKKTDPRGRGREIQGIFFKEDSHKESNDCSCGG

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-B receptor 2 (EC 2.7.10.1) (Developmentally-regulated Eph-related tyrosine kinase) (ELK-related tyrosine kinase) (EPH tyrosine kinase 3) (EPH-like kinase 5) (EK5) (hEK5) (Renal carcinoma antigen NY-REN-47) (Tyrosine-protein kinase TYRO5) (Tyrosine-protein kinase receptor EPH-3) [Cleaved into: EphB2/CTF1; EphB2/CTF2] 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 transmembrane ephrin-B 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. Functions in axon guidance during development. Involved in the guidance of commissural axons, that form a major interhemispheric connection between the 2 temporal lobes of the cerebral cortex. Also involved in guidance of contralateral inner ear efferent growth cones at the midline and of retinal ganglion cell axons to the optic disk. In addition to axon guidance, also regulates dendritic spines development and maturation and stimulates the formation of excitatory synapses. Upon activation by EFNB1, abolishes the ARHGEF15-mediated negative regulation on excitatory synapse formation. Controls other aspects of development including angiogenesis, palate development and in inner ear development through regulation of endolymph production. Forward and reverse signaling through the EFNB2/EPHB2 complex regulate movement and adhesion of cells that tubularize the urethra and septate the cloaca. May function as a tumor suppressor. May be involved in the regulation of platelet activation and blood coagulation (PubMed:30213874).

Subcellular Localization: Cell membrane; Single-pass type I membrane protein. Cell projection, axon . Cell projection, dendrite .; Secreted . Note=(Microbial infection) Proteolytically cleaved at the cell membrane upon H.pylori infection.

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.