EphA2 Protein, Human (HEK293, His)

Cat. No.:	HY-P70336
Synonyms:	rHuEphrin type-A receptor 2/EphA2, His; Ephrin type-A receptor 2; Epithelial cell kinase; Tyrosine-protein kinase receptor ECK; EPHA2
Species:	Human
Source:	HEK293
Accession:	P29317/NP_004422.2 (A24-N534)
Gene ID:	1969
Molecular Weight:	Approximately 65-75 kDa

PROPERTIES

AA Sequence	A Q G K E V V L L D F A A A G G E L G W L T H P Y G K G W D L M Q N I M N D M P I Y M Y S V C N V M S G D Q D N W L R T N W V Y R G E A E R I F I E L K F T V R D C N S F P G G A S S C K E T F N L Y Y A E S D L D Y G T N F Q K R L F T K I D T I A P D E I T V S S D F E A R H V K L N V E E R S V G P L T R K G F Y L A F Q D I G A C V A L L S V R V Y Y K K C P E L L Q G L A H F P E T I A G S D A P S L A T V A G T C V D H A V V P P G G E E P R M H C A V D G E W L V P I G Q C L C Q A G Y E K V E D A C Q A C S P G F F K F E A S E S P C L E C P E H T L P S P E G A T S C E C E E G F F R A P Q D P A S M P C T R P P S A P H Y L T A V G M G A K V E L R W T P P Q D S G G R E D I V Y S V T C E Q C W P E S G E C G P C E A S V R Y S E P P H G L T R T S V T V S D L E P H M N Y T F T V E A R N G V S G L V T S R S F R T A S V S I N Q T E P P K V R L E G R S T T S L S V S W S I P P P Q Q S R V W K Y E V T Y R K K G D S N S Y N V R R T E G F S V T L D D L A P D T T Y L V Q V Q A L T Q E G Q G A G S K V H E F Q T L S P E G S G N
Biological Activity	1. Measured by its binding ability in a functional ELISA. Immobilized rhEphA2 at 2 μg/mL (100 μL/well) can bind rmEphrin-A1. The ED_{50} for this effect is 4.594 ng/mL. 2. Measured in a cell proliferation assay using PC-3 cells. The ED_{50} for this effect is 0.8703 ng/mL, corresponding to a specific activity is 1.15×10^6 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 5% Trehalose, pH7.4 or PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	EphA2 protein is a receptor tyrosine kinase that interacts with various membrane-bound ephrin-A family ligands on neighboring cells, leading to bidirectional signaling. This receptor is involved in regulating cell migration, adhesion, proliferation, and differentiation through forward and reverse signaling pathways. It plays a role in cell adhesion and differentiation by interacting with DSG1/desmoglein-1 and inhibiting the ERK1/ERK2 signaling pathway. Additionally, EphA2 protein may be involved in UV radiation-induced apoptosis and stimulate chemotactic cell migration independently of ligand binding. During development, it contributes to pattern formation and the development of fetal tissues, including angiogenesis, hindbrain development, and mammary gland morphogenesis. EphA2 protein also interacts with Ephrin-A5/EFNA5 to regulate lens fiber cells' shape and interactions, crucial for maintaining lens transparency. Moreover, it plays a role in bone remodeling by regulating osteoclastogenesis and osteoblastogenesis through its interaction with Ephrin-A2/EFNA2. Notably, EphA2 protein acts as a receptor for hepatitis C virus (HCV) in hepatocytes, facilitating viral cell entry by promoting the formation of CD81-CLDN1 receptor complexes and enhancing membrane fusion with HCV envelope glycoproteins.

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