EphA2 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P75240
Synonyms:	Ephrin type-A receptor 2; Epithelial cell kinase; EPHA2; ECK
Species:	Mouse
Source:	HEK293
Accession:	Q03145 (K26-N535)
Gene ID:	13836
Molecular Weight:	Approximately 65-95 kDa

PROPERTIES

AA Sequence	K E V V L L D F A A M K G E L G W L T H P Y G K G W D L M Q N I M D D M P I Y M Y S V C N V V S G D Q D N W L R T N W V Y R E 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 V D Y G T N F Q K R Q F T K I D T I A P D E I T V S S D F E A R N V K L N V E E R M 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 M L Q S L A R F P E T I A V A V S D T Q P L A T V A G T C V D H A V V P Y G G E G P L M H C T V D G E W L V P I G Q C L C Q E G Y E K V E D A C R A C S P G F F K S E A S E S P C L E C P E H T L P S T E G A T S C Q C E E G Y F R A P E D P L S M S C T R P P S A P N Y L T A I G M G A K V E L R W T A P K D T G G R Q 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 A L T R T S V T V S D L E P H M N Y T F A 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 D R S T T S L S V T W S I P V S Q Q S R V W K Y E V T Y R K K G D A 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 T E G S A N
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized mouse EphA2 at 2 μg/mL (100 μl/well) can bind mouse EphrinA1 with a linear range of 0.16-20 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 5%Trehalose, 5% Mannitol, 0.01%Tween-80, pH 7.4 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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	The EphA2 protein, a receptor tyrosine kinase, engages in promiscuous binding to membrane-bound ephrin-A family ligands on adjacent cells, initiating contact-dependent bidirectional signaling. The downstream pathway originating from the receptor is known as forward signaling, while the pathway downstream of the ephrin ligand is termed reverse signaling. Activated by the ligand ephrin-A1/EFNA1, EphA2 plays a regulatory role in cell migration, integrin-mediated adhesion, proliferation, and differentiation. Additionally, EphA2 modulates cell adhesion and differentiation through DSG1/desmoglein-1 and inhibits the ERK1/ERK2 signaling pathway. It may also participate in UV radiation-induced apoptosis and exhibit a ligand-independent stimulatory effect on chemotactic cell migration. During development, EphA2 functions in various aspects of pattern formation and contributes to the development of several fetal tissues, including angiogenesis, early hindbrain development, and epithelial proliferation and branching morphogenesis during mammary gland development. Interaction with the ligand ephrin-A5/EFNA5 may regulate lens fiber cells' shape and interactions, playing a crucial role in lens transparency development and maintenance. Furthermore, in collaboration with ephrin-A2/EFNA2, EphA2 may contribute to bone remodeling by regulating osteoclastogenesis and osteoblastogenesis.

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