

EphA3 Protein, Human (HEK293, His)

Cat. No.:	HY-P71663
Synonyms:	AW492086; Cek4; EC 2.7.10.1; EK4; End3; Eph receptor A3; EPH-like kinase 4; EPH-like tyrosine kinase 1; EPHA3; ETK; ETK1; HEK 4; HEK; HEK4; Tyro 4
Species:	Human
Source:	HEK293
Accession:	P29320 (E21-Q541)
Gene ID:	2042
Molecular Weight:	Approximately 67.0 kDa

PROPERTIES

AA Sequence

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E L I P Q P S N E V   N L L D S K T I Q G   E L G W I S Y P S H   G W E E I S G V D E
H Y T P I R T Y Q V   C N V M D H S Q N N   W L R T N W V P R N   S A Q K I Y V E L K
F T L R D C N S I P   L V L G T C K E T F   N L Y Y M E S D D D   H G V K F R E H Q F
T K I D T I A A D E   S F T Q M D L G D R   I L K L N T E I R E   V G P V N K K G F Y
L A F Q D V G A C V   A L V S V R V Y F K   K C P F T V K N L A   M F P D T V P M D S
Q S L V E V R G S C   V N N S K E E D P P   R M Y C S T E G E W   L V P I G K C S C N
A G Y E E R G F M C   Q A C R P G F Y K A   L D G N M K C A K C   P P H S S T Q E D G
S M N C R C E N N Y   F R A D K D P P S M   A C T R P P S S P R   N V I S N I N E T S
V I L D W S W P L D   T G G R K D V T F N   I I C K K C G W N I   K Q C E P C S P N V
R F L P R Q F G L T   N T T V T V T D L L   A H T N Y T F E I D   A V N G V S E L S S
P P R Q F A A V S I   T T N Q A A P S P V   L T I K K D R T S R   N S I S L S W Q E P
E H P N G I I L D Y   E V K Y Y E K Q E Q   E T S Y T I L R A R   G T N V T I S S L K
P D T I Y V F Q I R   A R T A A G Y G T N   S R K F E F E T S P   D S F S I S G E S S
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Biological Activity

1. Measured by its binding ability in a functional ELISA. Immobilized EPHA3 at 0.2 µg/well can bind human EFNA5, the EC₅₀ of the protein is 0.4157-1.179 ng/mL.
2. Human EPHA3 protein his tag captured on COOH chip can bind Human EFNA5 protein Fc tag with an affinity constant of 13.8 nM as detected by LSPR Assay.

Appearance

Lyophilized powder.

Formulation

Lyophilized from a 0.2 µm sterile filtered PBS, 6% Trehalose, pH 7.4.

Endotoxin Level

<1 EU/µg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O.

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 EphA3 protein, a receptor tyrosine kinase, engages in promiscuous binding to membrane-bound ephrin 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. Highly promiscuous for ephrin-A ligands, EphA3 exhibits a preferential binding affinity for EFNA5. Upon activation by EFNA5, EphA3 plays a pivotal role in regulating cell-cell adhesion, cytoskeletal organization, and cell migration. Additionally, EphA3 is implicated in cardiac cell migration and differentiation, regulating the formation of the atrioventricular canal and septum during development, likely through activation by EFNA1. In the context of retinotectal mapping, EphA3 is involved in the guidance of neurons. Furthermore, EphA3 may control the segregation, though not the guidance, of motor and sensory axons during neuromuscular circuit development.

Caution: Product has not been fully validated for medical applications. For research use only.

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