Rabbit EPHA2 Polyclonal Antibody | anti-EPHA2 antibody

Phospho-EPHA2 (Thr587) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA328435	**Rabbit**	**Human, Mouse, RatPredicted: Pig, Bovine, Horse, Sheep, Rabbit, Dog, Xenopus**	**ELISA, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

EPHA2; Polyclonal Antibody; Phospho-EPHA2 (Thr587) Antibody; ARCC2; AW545284; CTPA; CTPP1; CTRCT6; EC 2.7.10.1; Eck; Eph receptor A2; EPHA2_HUMAN; Ephrin receptor; Ephrin receptor EphA2; Ephrin type A receptor 2; Ephrin type-A receptor 2; Epithelial cell kinase; Epithelial cell receptor protein tyrosine kinase; Myk 2; Myk2; Sek 2; Sek2; Soluble EPHA2 variant 1; Tyrosine protein kinase receptor ECK; Tyrosine-protein kinase receptor ECK; Tyrosine-protein kinase receptor MPK-5; Tyrosine-protein kinase receptor SEK-2; anti-EPHA2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted: Pig, Bovine, Horse, Sheep, Rabbit, Dog, Xenopus
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-EPHA2 (Thr587) Antibody detects endogenous levels of EPHA2 only when phosphorylated at Thr587.
Purity/Purification	Purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid; Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	976
Applicable Applications for anti-EPHA2 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human EPHA2 around the phosphorylation site of Thr587.
Tissue Specificity	Expressed in brain and glioma tissue and glioma cell lines (at protein level). Expressed most highly in tissues that contain a high proportion of epithelial cells, e.g. skin, intestine, lung, and ovary.
Subcellular Location	Plasma Membrane
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

WB (Western Blot)
Western blot analysis of Phospho-EPHA2 (Thr587) in lysates of NIH/3T3?, using Phospho-EPHA2 (Thr587) Antibody.

IHC (Immunohistochemisry)
At 1/100 staining human lung cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary

IHC (Immunohiostchemistry)
At 1/100 staining rat liver tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary

IHC (Immunohistochemistry)
At 1/100 staining mouse liver tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary

ADDITIONAL INFORMATION

Related Product Information for anti-EPHA2 antibody	Description: 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. Regulates cell adhesion and differentiation through DSG1/desmoglein-1 and inhibition of the ERK1/ERK2 (MAPK3/MAPK1, respectively) 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. Post Translational Modifications: Autophosphorylates. Phosphorylated on tyrosine upon binding and activation by EFNA1. Phosphorylated residues Tyr-588 and Tyr-594 are required for binding VAV2 and VAV3 while phosphorylated residues Tyr-735 and Tyr-930 are required for binding PI3-kinase p85 subunit (PIK3R1, PIK3R2 or PIK3R3). These phosphorylated residues are critical for recruitment of VAV2 and VAV3 and PI3-kinase p85 subunit which transduce downstream signaling to activate RAC1 GTPase and cell migration. Dephosphorylation of Tyr-930 by PTPRF prevents the interaction of EPHA2 with NCK1. Phosphorylated at Ser-897 by PKB; serum-induced phosphorylation which targets EPHA2 to the cell leading edge and stimulates cell migration. Phosphorylation by PKB is inhibited by EFNA1-activated EPHA2 which regulates PKB activity via a reciprocal regulatory loop. Phosphorylated at Ser-897 in response to TNF by RPS6KA1 and RPS6KA3; RPS6KA-EPHA2 signaling pathway controls cell migration (PubMed:26158630). Phosphorylated at Ser-897 by PKA; blocks cell retraction induced by EPHA2 kinase activity (PubMed:27385333). Dephosphorylated by ACP1. Ubiquitinated by CHIP/STUB1. Ubiquitination is regulated by the HSP90 chaperone and regulates the receptor stability and activity through proteasomal degradation. ANKS1A prevents ubiquitination and degradation (By similarity). Subunit Structure: Homodimer. Interacts with SLA. Interacts (phosphorylated form) with VAV2, VAV3 and PI3-kinase p85 subunit (PIK3R1, PIK3R2 or PIK3R3); critical for the EFNA1-induced activation of RAC1 which stimulates cell migration (By similarity). Interacts with INPPL1; regulates activated EPHA2 endocytosis and degradation. Interacts (inactivated form) with PTK2/FAK1 and interacts (EFNA1 ligand-activated form) with PTPN11; regulates integrin-mediated adhesion. Interacts with ARHGEF16, DOCK4 and ELMO2; mediates ligand-independent activation of RAC1 which stimulates cell migration. Interacts with CLDN4; phosphorylates CLDN4 and may regulate tight junctions. Interacts with ACP1. Interacts (via SAM domain) with ANKS1A (via SAM domain). Interacts with CEMIP. Interacts with NCK1; may regulate EPHA2 activity in cell migration and adhesion. Similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. Ephrin receptor subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	32967311
NCBI GeneID	1969
NCBI Accession #	NP_004422.2
NCBI GenBank Nucleotide #	NP_004422.2
UniProt Accession #	P29317

Molecular Weight	Observed: 105KD Predicted: 109 kDa
NCBI Official Full Name	ephrin type-A receptor 2 isoform 1
NCBI Official Synonym Full Names	EPH receptor A2
NCBI Official Symbol	EPHA2
NCBI Official Synonym Symbols	ECK; CTPA; ARCC2; CTPP1; CTRCT6
NCBI Protein Information	ephrin type-A receptor 2
UniProt Protein Name	Ephrin type-A receptor 2
UniProt Gene Name	**EPHA2**
UniProt Synonym Gene Names	ECK
UniProt Entry Name	EPHA2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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