ARG57080
anti-EphA2 antibody [66G9]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [66G9] recognizes EphA2
Tested Reactivity	Hu
Tested Application	WB
Host	Mouse
Clonality	Monoclonal
Clone	66G9
Isotype	IgG2b, kappa
Target Name	EphA2
Species	Human
Immunogen	Recombinant fragment around aa. 27-537 of Human EphA2.
Conjugation	Un-conjugated
Alternate Names	CTRCT6; Ephrin type-A receptor 2; Tyrosine-protein kinase receptor ECK; Epithelial cell kinase; ECK; ARCC2; CTPA; CTPP1; EC 2.7.10.1

Application Instructions

Application table

Application	Dilution
WB	Assay-dependent

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

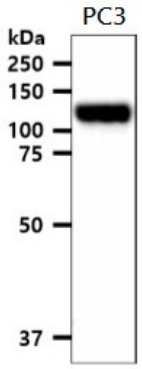
Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 10% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	10% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

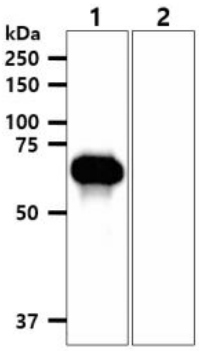
Database links	GeneID: 1969 Human Swiss-port # P29317 Human
Gene Symbol	EPHA2
Gene Full Name	EPH receptor A2
Background	This gene belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family. EPH and EPH-related receptors have been implicated in mediating developmental events, particularly in the nervous system. Receptors in the EPH subfamily typically have a single kinase domain and an extracellular region containing a Cys-rich domain and 2 fibronectin type III repeats. The ephrin receptors are divided into 2 groups based on the similarity of their extracellular domain sequences and their affinities for binding ephrin-A and ephrin-B ligands. This gene encodes a protein that binds ephrin-A ligands. Mutations in this gene are the cause of certain genetically-related cataract disorders.[provided by RefSeq, May 2010]
Function	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. [UniProt]
Calculated Mw	108 kDa
PTM	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).

Images



ARG57080 anti-EphA2 antibody [66G9] WB image

Western blot: 40 µg of PC3 cell lysate stained with ARG57080 anti-EphA2 antibody [66G9] at 1:1000.



ARG57080 anti-EphA2 antibody [66G9] WB image

Western blot: 20 ng of 1) Recombinant Human EPHA2 extracellular domain, 2) Recombinant Human EPHA2 cytoplasmic domain stained with ARG57080 anti-EphA2 antibody [66G9] at 1:1000. .