

ARG82509 Human EphA2 ELISA Kit

Package: 96 wells
Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG82509-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG82509-002	Standard	2 X 10 ng/vial	4°C
ARG82509-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG82509-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG82509-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG82509-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG82509-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG82509-008	25X Wash buffer	20 ml	4°C
ARG82509-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG82509-010	STOP solution	10 ml (Ready to use)	4°C
ARG82509-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG82509 Human EphA2 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human EphA2 in serum, plasma (EDTA, heparin) and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	EphA2
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	10 pg/ml
Sample Type	Serum, plasma (EDTA, heparin) and cell culture supernatants.
Standard Range	15.6 - 1000 pg/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: 5.3% Inter-Assay CV: 6.8%

Alternate Names CTCT6; Ephrin type-A receptor 2; Tyrosine-protein kinase receptor ECK; Epithelial cell kinase; ECK; ARCC2; CTPA; CTPP1; EC 2.7.10.1

Application Instructions

Assay Time ~ 5 hours

Properties

Form 96 well

Storage instruction Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

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]

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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

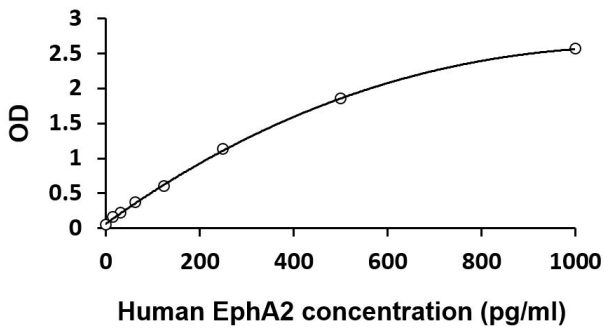
(PubMed:26158630). Phosphorylated at Ser-897 by PKA; blocks cell retraction induced by EPHA2 kinase activity (PubMed:27385333). Dephosphorylated by ACP1.

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). [UniProt]

Cellular Localization

Cell membrane; Single-pass type I membrane protein. Cell projection, ruffle membrane; Single-pass type I membrane protein. Cell projection, lamellipodium membrane; Single-pass type I membrane protein. Cell junction, focal adhesion. Note=Present at regions of cell-cell contacts but also at the leading edge of migrating cells (PubMed:19573808, PubMed:20861311). Relocates from the plasma membrane to the cytoplasmic and perinuclear regions in cancer cells (PubMed:18794797). [UniProt]

Images



ARG82509 Human EphA2 ELISA Kit standard curve image

ARG82509 Human EphA2 ELISA Kit results of a typical standard run with optical density reading at 450 nm.