10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EphA2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1054a

Product Information

Application	WB, IHC, E
Primary Accession	P29317
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1B3C7
Isotype	IgM
Calculated MW	108266
Description	EPH receptor A2 (EphA2), with 976-amino acid protein (about 107 kDa), belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family. EphA1, EphA2, EphA3, EphA4, EphA5, EphA6, EphA7, EphA8, EphA10, EphB1, EphB2, EphB3, EphB4 and EphB6 are Eph family receptors for Ephrin family ligands. In normal cells, EphA2 negatively regulates cell growth and invasiveness. EphA2 is overexpressed by many human cancers, and is often associated with poor prognostic features. The clinical significance of the expression of EphA2 was observed in breast, prostate, colon, skin, cervical, ovarian, and lung cancers.EphA2 may serve as a novel target for bladder cancer, colonic adenocarcinoma and ovarian cancer therapy.
Immunogen	Purified recombinant fragment of EphA2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	1969
Other Names	Ephrin type-A receptor 2, 2.7.10.1, Epithelial cell kinase, Tyrosine-protein kinase receptor ECK, EPHA2, ECK
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EphA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHA2
Synonyms	ECK
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.
Cellular Location	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).
Tissue Location	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.

References

1. Shaji Abraham, Deborah W. Knapp, Liang Cheng. Clin Cancer Res. 2006 Jan 15;12(2):353-60. 2. Charles N Landen, Michael S Kinch, Anil K Sood. Expert Opin Ther Targets. 2005 Dec;9(6):1179-87.

Images

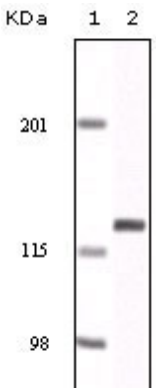

Figure 1: Western blot analysis using EphA2 mouse mAb against NIH/3T3 cell lysate.

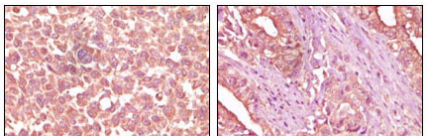

Figure 2: Immunohistochemical analysis of paraffin-embedded human skin carcinoma (left) and pancreas carcinoma (right) tissue, showing cytoplasmic localization using EphA2 mouse mAb with DAB staining.