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EphB4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1056a

Product Information

Application	WB, IHC, E
Primary Accession	P54760
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5B8F7
Isotype	IgG2a
Calculated MW	108270
Description	EPH receptor B4 (EphB4), with 987-amino acid protein (about 108kDa), belongs to the ephrin receptor subfamily of the protein-tyrosine kinase family. The Eph receptor tyrosine kinases and their ligands, the ephrins, regulate numerous biological processes in developing and adult tissues and have been implicated in cancer progression and in pathological forms of angiogenesis. EphB4 acts as a negative regulator of blood vessel branching and vascular network formation, switching the vascularization program from sprouting angiogenesis to circumferential vessel growth. EphB4 and its ligand ephrinB2 express in several kinds of tumor cells and correlate with tumorigenesis. EphB4 is thus a potential candidate as a predictor of disease outcome in several kinds of tumor and as target for novel therapy.
Immunogen	Purified recombinant fragment of EphB4 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2050
Other Names	Ephrin type-B receptor 4, 2.7.10.1, Hepatoma transmembrane kinase, Tyrosine-protein kinase TYRO11, EPHB4, HTK, MYK1, TYRO11
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	EphB4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EPHB4
Synonyms	HTK, MYK1, TYRO11
Function	Receptor tyrosine kinase which binds promiscuously to transmembrane ephrin-B 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. Together with its cognate ligand/functional ligand EFNB2, it is involved in the regulation of cell adhesion and migration, and plays a central role in heart morphogenesis, angiogenesis and blood vessel remodeling and permeability. EPHB4-mediated forward signaling controls cellular repulsion and segregation from EFNB2-expressing cells. Phosphorylates inactive tyrosine-protein kinase EPHB6 which promotes interaction of EPHB6 with SH2 domains, allowing it to recruit SH2 domain-containing signaling adapters (PubMed:34431498).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Abundantly expressed in placenta but also detected in kidney, liver, lung, pancreas, skeletal muscle and heart. Expressed in primitive and myeloid, but not lymphoid, hematopoietic cells. Also observed in cell lines derived from liver, breast, colon, lung, melanocyte and cervix.

References

1. J. Chrencik, A. Brooun, M. Recht. Structure. 2006 Feb;14(2):321-30. 2. Qinghua WU, Zhenhe SUO,Bjon RISBERG. Pathol Oncol Res. 2004;10(1):26-33.

Images

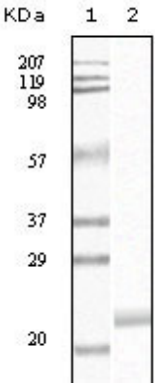


Figure 1: Western blot analysis using EphB4 mouse mAb against truncated EphB4 recombinant protein.

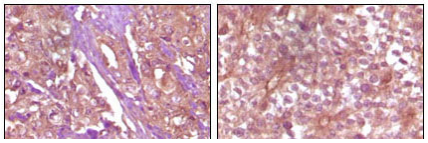


Figure 2: Immunohistochemical analysis of paraffin-embedded Human pancreas carcinoma (left) and breast carcinoma (right) tissue, showing membrane and cytoplasmic (pancreas carcinoma) localization, membrane (breast carcinoma) localization using EphB4 mouse mAb with DAB staining.

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