

Datasheet: HCA025

Description:	HUMAN ANTI EPHB4
Specificity:	EPHB4
Other names:	EPHRIN TYPE-B RECEPTOR 4
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD03934
Isotype:	HuCAL Fab bivalent
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin (1)	▪			10 ug/ml
ELISA	▪			2 ug/ml
Immunoprecipitation			▪	
Western Blotting	▪			2 ug/ml

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.

Target Species

Human

Species Cross Reactivity

Based on sequence similarity, is expected to react with: Mouse

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

A lyophilized, bivalent human recombinant Fab selected from the HuCAL® GOLD phage

display library. Expressed in *E. coli* and purified using NiNTA affinity chromatography. This Fab fragment is bivalent by dimerization of the bacterial alkaline phosphatase fusion protein. The antibody is tagged with a DYKDDDDK tag and a Strep tag at the C-terminus of the antibody heavy chain.

Reconstitution	Reconstitute with 0.25 ml distilled water
Preparation	Metal chelate affinity chromatography
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	None present
Approx. Protein Concentrations	0.4 mg/ml after reconstitution
Immunogen	Recombinant EPHB4 fusion protein (Leu563 - Tyr987), corresponding to the intracellular part of the protein, including the kinase domain and an SAM (sterile alpha motif) domain
External Database Links	UniProt: P54760 Related reagents Entrez Gene: 2050 EPHB4 Related reagents
Synonyms	HTK, TYRO11
RRID	AB_2262395
Specificity	<p>Human anti EPHB4 antibody recognizes the receptor tyrosine kinase EPHB4. EPHB4 is a member of the largest known family of these kinases, and plays an important role in a variety of processes during embryonic development including pattern formation, cell aggregation and migration, segmentation, neural development, angiogenesis, and vascular network assembly.</p> <p>Specifically, EPHB4, along with its ligand, Ephrin-B2, is essential for vascular remodeling, maturation and directed growth. Both Ephrin-B2 and EPHB4 targeted gene knock-outs in mice show lack of remodeling of the primitive vascular plexus to form mature vascular structures. EPHB4 expression is restricted to venous endothelial cells. EPHB4 and Ephrin-B2 are also essential for defining the boundaries between arterial and venous domains, which persist in the adult. EPHB4 selectively binds Ephrin-B2 and not other Ephrin B ligands.</p> <p>The B class Ephrins are comprised of transmembrane proteins with an intracellular domain that can elaborate reverse signaling. Ligand-receptor binding leads to protein clustering followed by receptor activation. Furthermore, interaction between EPHB4 and Ephrin-B2 can provoke bidirectional signaling. It has been shown in vitro that EPHB4-mediated forward signaling restricts intermingling of cells and supports cellular segregation, whereas reverse signaling from Ephrin-B2 stimulates migration and sprouting</p>

angiogenesis. Downstream signaling by EPHBs regulates cell proliferation, cytoskeletal organization, and migration.

EPHB4 is abundantly expressed in placenta and in a range of primary tissues and malignant cell lines. Expressed in foetal, but not adult, brain, and in primitive and myeloid, but not lymphoid, hematopoietic cells.

In Western blotting, Human anti EPHB4 antibody may cross-react with EPHB1, however in immunohistology the staining pattern is consistent with specificity only for EPHB4

References 1. Xia, G. *et al.* (2005) EphB4 expression and biological significance in prostate cancer. [Cancer Res. 65\(11\): 4623-4632.](#)

Storage Prior to reconstitution store at +4°C.
After reconstitution store at -20°C.
Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 6 months from date of reconstitution

Acknowledgements Sold under license of U.S. Patents 6753136, 7785859 and 8273688 and corresponding patents. This antibody was developed by Bio-Rad, Zeppelinstr. 4, 82178 Puchheim, Germany.

Health And Safety Information Material Safety Datasheet documentation #10162 available at: 10162: <https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf>

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Regulatory For research purposes only

Technical Advice Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the [HuCAL Antibodies Technical Manual](#)

Related Products

Recommended Secondary Antibodies

Mouse Anti Synthetic Peptide HISTIDINE TAG (MCA5995...) [HRP](#)

Mouse Anti Synthetic Peptide STREP-TAG CLASSIC (MCA2489...) [HRP](#)

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