

Datasheet: HCA001

Description:	HUMAN ANTI EPHB4
Specificity:	EPHB4
Other names:	EPHRIN TYPE-B RECEPTOR 4
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	AbD1327
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	■			10ug/ml
ELISA	■			2ug/ml
Immunoprecipitation			■	
Western Blotting	■			2ug/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.

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.
Product Form	A bivalent human recombinant Fab selected from the HuCAL® GOLD phage display library. Expressed in <i>E. coli</i> and purified using NiNTA affinity chromatography. This Fab fragment is dimerized via a helix-turn-helix motif. The antibody is tagged with a myc-tag (EQKLISEEDL) and a his-tag (HHHHHH) at the C-terminus of the anti-body heavy chain. This antibody is supplied lyophilised.
Reconstitution	Reconstitute with 1.0ml distilled water
Preparation	Metal chelate affinity chromatography
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide (NaN ₃)

Stabilisers	1% Bovine Serum Albumin
Approx. Protein Concentrations	0.1mg/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	<p>UniProt: P54760 Related reagents</p> <p>Entrez Gene: 2050 EPHB4 Related reagents</p>
Synonyms	HTK, TYRO11
Specificity	<p>HCA001 recognises the receptor tyrosine kinase EPHB4, 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 angiogenesis. Downstream signaling by EPHBs regulates cell proliferation, cytoskeletal organization, and migration.</p> <p>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.</p> <p>In Western blotting, HCA001 may cross-react with EphB1, however in immunohistology the staining pattern is consistent with specificity only for EPHB4.</p>
ELISA	Due to the presence of bovine serum albumin (BSA), this antibody is unsuitable for use as a capture reagent in sandwich ELISA applications. This product is also available without BSA, please enquire .
References	1. Xia, G. <i>et al.</i> (2005) EphB4 expression and biological significance in prostate cancer. Cancer Res. 65: 4623-4632 .
Storage	Prior to reconstitution store at +4°C. After reconstitution store at -20°C.

Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life	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 available at: Material Safety Datasheet Documentation #10041 available at: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
--------------------------------------	--

Licensed Use	For in vitro research purposes only, unless otherwise specified in writing by Bio-Rad.
---------------------	--

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 Human C-MYC (MCA2200...)	HRP
Goat Anti Human IgG F(ab') ₂ (0500-0099...)	Alk. Phos. , HRP
Goat Anti Human IgG F(ab') ₂ (STAR126...)	Alk. Phos. , Biotin , HRP

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
----------------------------------	---	------------------	---	---------------	---

'M304897:170420'

Printed on 10 Nov 2017