

## Datasheet: HCA001

<b>Description:</b>	HUMAN ANTI EPHB4
<b>Specificity:</b>	EPHB4
<b>Other names:</b>	EPHRIN TYPE-B RECEPTOR 4
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	AbD01327
<b>Isotype:</b>	HuCAL Fab bivalent
<b>Quantity:</b>	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](http://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.

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	Based on sequence similarity, is expected to react with: Mouse <b>N.B.</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.
<b>Product Form</b>	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.

<b>Reconstitution</b>	Reconstitute with 1.0ml distilled water
<b>Preparation</b>	Metal chelate affinity chromatography
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	0.1 mg/ml after reconstitution
<b>Immunogen</b>	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.
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">P54760</a> <a href="#">Related reagents</a>  <b>Entrez Gene:</b> <a href="#">2050</a> EPHB4 <a href="#">Related reagents</a>
<b>Synonyms</b>	HTK, TYRO11
<b>RRID</b>	AB_2100123
<b>Specificity</b>	<p><b>Human anti EPHB4, clone AbD01327</b> recognizes 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>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 <i>in vitro</i> 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>

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, clone AbD01327 may cross-react with EPHB1, however in immunohistology the staining pattern is consistent with specificity only for EPHB4.

<b>ELISA</b>	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, <a href="#">please enquire</a> .
<b>References</b>	1. Xia, G. <i>et al.</i> (2005) EphB4 expression and biological significance in prostate cancer. <a href="#">Cancer Res. 65: 4623-4632</a> .
<b>Storage</b>	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.
<b>Guarantee</b>	6 months from date of reconstitution.
<b>Acknowledgements</b>	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. His-tag is a registered trademark of EMD Biosciences.
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: 10041: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf</a>
<b>Licensed Use</b>	For in vitro research purposes only, unless otherwise specified in writing by Bio-Rad.
<b>Regulatory</b>	For research purposes only
<b>Technical Advice</b>	Recommended protocols and further information about HuCAL recombinant antibody technology can be found in the <a href="#">HuCAL Antibodies Technical Manual</a>

## Related Products

### Recommended Secondary Antibodies

Mouse Anti Synthetic Peptide HISTIDINE TAG (MCA5995...)	<a href="#">HRP</a>
Goat Anti Human IgG F(ab') <sub>2</sub> (0500-0099...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Goat Anti Human IgG F(ab') <sub>2</sub> (STAR126...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a> , <a href="#">HRP</a>
Mouse Anti Human C-MYC (MCA2200...)	<a href="#">HRP</a>

**North & South America** Tel: +1 800 265 7376  
Fax: +1 919 878 3751

**Worldwide** Tel: +44 (0)1865 852 700  
Fax: +44 (0)1865 852 739

**Europe** Tel: +49 (0) 89 8090 95 21  
Fax: +49 (0) 89 8090 95 50

From March 15, 2021, we will no longer supply printed datasheets with our products.  
Look out for updates on how to access your digital version at [bio-rad-antibodies.com](https://bio-rad-antibodies.com)

'M348331:190220'

**Printed on 08 Feb 2021**