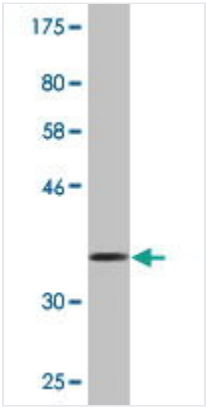
# EphB1 Antibody – Mouse Monoclonal

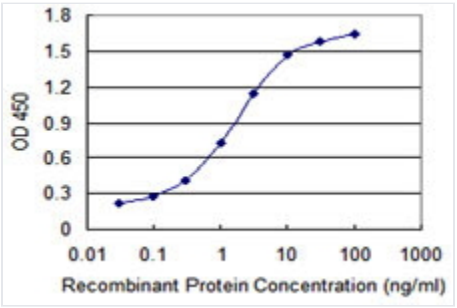
## PRODUCT OVERVIEW

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| **Product Name** | EphB1, Monoclonal Antibody |
| **Full Product Name** | EphB1 (Ephrin Type-B Receptor 1, Tyrosine-protein Kinase Receptor EPH-2, NET, EPH-like Kinase 6, EK6, hEK6, HEK-6, EPHT2) (Biotin) |
| **Product Gene Name** | anti-EphB1 antibody |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2a,k |
| **Clone Number** | 4G6 |
| **Host** | Mouse |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin. |
| **Purity/Purification** | Purified by Protein A Affinity Chromatography. |
| **Specificity** | Recognizes human EPHB1. |
| **Preparation and Storage** | Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. |
| **Molecular Weight** | 109,885 Da |
| **Chromosome Location** | Chromosome: 3; NC_000003.11 (134514099..134979309). Location: 3q21-q23 |
| **OMIM** | 600600 |
| **3D Structure** | ModBase 3D Structure for P54762 |
| **Immunogen** | Partial recombinant corresponding to aa221-320 from human EPHB1 (NP_004432.1) with GST tag. MW of the GST tag alone is 26kD. |
| **Immunogen Sequence** | ARGTCIPNAEEVDVPIKLYCNGDGEWMVPIGRCTCKPGYEPENSVACKACPAGTFKASQEAEGCSHCPSNSRSPAEASPICTCRTGYYRADFDPPEVAC |
| **Conjugate** | Biotin |
| **Product Categories/Family for anti-EphB1 antibody** | Antibodies; Tyrosine Kinases |
| **Applications Tested/Suitable for anti-EphB1 antibody** | ELISA (EIA), Western Blot (WB) |
| **Application Notes for anti-EphB1 antibody** | Applications are based on unconjugated antibody. |

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| **Related Product Information for anti-EphB1 antibody** | Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The tyrosine kinase (TK) group is mainly involved i the regulation of cell-cell interactions such as differentiation, adhesion, motility and death. There are currently about 90 TK genes sequenced, 58 are of receptor protein TK (e.g. EGFR, EPH, FGFR, PDGFR, TRK, and VEGFR families), and 32 of cytosolic TK (e.g. ABL, FAK, JAK, and SRC families). |
| **Other Notes** | Small volumes of anti-EphB1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for EphB1 purchase** | MBS6141751 is an antibody targeting EphB1. Also known as EphB1 (Ephrin Type-B Receptor 1, Tyrosine-protein Kinase Receptor EPH-2, NET, EPH-like Kinase 6, EK6, hEK6, HEK-6, EPHT2) (Biotin). Reactive in Human. Host: Mouse. |




**Western Blot (WB) of anti-EphB1 antibody**
Western Blot detection against Immunogen (36.63kD).




**Testing Data of anti-EphB1 antibody**
Detection limit for recombinant GST tagged EPHB1 is 0.03ng/ml as a capture antibody.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for EphB1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 4758284 |
| **NCBI GeneID** | 2047 |
| **NCBI Accession #** | NP_004432.1 |
| **UniProt Primary Accession #** | P54762 |
| **UniProt Secondary Accession #** | O43569; O95142; O95143; Q0VG87; A8K593 |
| **UniProt Related Accession #** | P54762 |
| **GenBank Nucleotide #** | NM_004441 |
| **NCBI Official Full Name** | ephrin type-B receptor 1 |
| **NCBI Official Synonym Full Names** | EPH receptor B1 |
| **NCBI Official Symbol** | EPHB1 |
| **NCBI Official Synonym Symbols** | ELK; NET; Hek6; EPHT2 |
| **UniProt Protein Name** | Ephrin type-B receptor 1 |
| **UniProt Synonym Protein Names** | ELK; EPH tyrosine kinase 2; EPH-like kinase 6; EK6; hEK6; Neuronally-expressed EPH-related tyrosine kinase; NET; Tyrosine-protein kinase receptor EPH-2 |
| **Protein Family** | Ephrin type-B receptor |
| **UniProt Gene Name** | EPHB1 |

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| **UniProt Synonym Gene Names** | ELK; EPHT2; HEK6; NET; EK6; hEK6; NET |
| **UniProt Entry Name** | EPHB1_HUMAN |
| **NCBI Protein Information** | ephrin type-B receptor 1; EK6; EPH-like kinase 6; eph tyrosine kinase 2; soluble EPHB1 variant 1; tyrosine-protein kinase receptor EPH-2; neuronally-expressed EPH-related tyrosine kinase |
| **NCBI Summary for EphB1** | Ephrin receptors and their ligands, the ephrins, mediate numerous developmental processes, particularly in the nervous system. Based on their structures and sequence relationships, ephrins are divided into the ephrin-A (EFNA) class, which are anchored to the membrane by a glycosylphosphatidylinositol linkage, and the ephrin-B (EFNB) class, which are transmembrane proteins. The Eph family of receptors are divided into 2 groups based on the similarity of their extracellular domain sequences and their affinities for binding ephrin-A and ephrin-B ligands. Ephrin receptors make up the largest subgroup of the receptor tyrosine kinase (RTK) family. The protein encoded by this gene is a receptor for ephrin-B family members. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for EphB1** | EphB1: a receptor tyrosine kinase of the Eph family. Receptor for members of the ephrin-B family: ephrin-B1, -B2 and -B3. The Eph receptor tyrosine kinase family, the largest in the tyrosine kinase group, has fourteen members. They bind membrane-anchored ligands, ephrins, at sites of cell-cell contact, regulating the repulsion and adhesion of cells that underlie the establishment, maintenance, and remodeling of patterns of cellular organization. Eph signals are particularly important in regulating cell adhesion and cell migration during development, axon guidance, homeostasis and disease. EphA receptors bind to GPI-anchored ephrin-A ligands, while EphB receptors bind to ephrin-B proteins that have a transmembrane and cytoplasmic domain. Interactions between EphB receptor kinases and ephrin-B proteins transduce signals bidirectionally, signaling to both interacting cell types. Eph receptors and ephrins also regulate the adhesion of endothelial cells and are required for the remodeling of blood vessels. The ligand-activated form of EphB1 interacts with GRB2, GRB10 and NCK through their respective SH2 domains. Four alternatively spliced isoforms are known.<br><br>Protein type: Protein kinase, tyrosine (receptor); Kinase, protein; Protein kinase, TK; Membrane protein, integral; EC 2.7.10.1; TK group; Eph family<br><br>Chromosomal Location of Human Ortholog: 3q21-q23<br><br>Cellular Component: early endosome membrane; integral to plasma membrane; axon; dendrite; extracellular region; plasma membrane; cytosol; lipid raft<br><br>Molecular Function: protein binding; transmembrane-ephrin receptor activity; axon guidance receptor activity; ATP binding<br><br>Biological Process: positive regulation of synaptogenesis; axon guidance; camera-type eye morphogenesis; peptidyl-tyrosine phosphorylation; neurogenesis; establishment of cell polarity; protein amino acid autophosphorylation; ephrin receptor signaling pathway; central nervous system projection neuron axonogenesis; angiogenesis; optic nerve morphogenesis; detection of temperature stimulus involved in sensory perception of pain; regulation of JNK cascade; cell-substrate adhesion; retinal ganglion cell axon guidance |
| **Research Articles on EphB1** | **1.** EphB1 stimulation triggered approximately 50% serine-threonine PTEN dephosphorylation and PTEN-Cbl complex disruption, a process requiring PTEN protein phosphatase activity. |
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