

## Mouse Anti-Human EphB4 Monoclonal Antibody (Clone #AB105)

Catalog#:	Quantity	Lot#
AB105-200	200 µg	0706
AB105-1000	1000 µg	0706

**Source:** Hybridoma cell line was selected from a mouse myeloma fused with B cells obtained from a mouse immunized with purified recombinant human EphB4 extracellular domain. IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography.

**Formulation:** Lyophilized powder lyophilized from phosphate-buffered saline (PBS)

**Preservative:** None.

**Purity:** >97% on 15% SDS-PAGE.

**Sterility:** 0.2 µm membrane-filtered and packaged aseptically.

**QC Tests:** SDS-PAGE, Western Blot, direct ELISA

### Reconstitution and Use:

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) to a concentration no less than 100 µg/ml and aliquot for future use. (*If the initial rehydration is too dilute, activity may be lost due to the non-specific adsorption to the container*). The solution can then be further diluted to a working stock solution.

### Storage and Stability:

Upon receiving, store the product at  $-20^{\circ}\text{C}$ . After reconstitution, store the working aliquots at  $2-8^{\circ}\text{C}$  for no more than 3 months. For extended storage, aliquot the rehydrated solution (100 µg/ml) and freeze at  $-70^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ . Avoid repeated freezing and thawing. More dilute solutions stored at  $-20^{\circ}\text{C}$  will lose activity faster.

### About EphB4:

EphB4, also known as Htk, Myk1, Tyro11 and Mdk2, is a receptor tyrosine kinase that binds the ligand Ephrin B2, but not other Ephrin ligands. It has been shown to be involved in the regulation of endothelial cells, carcinomas and some hematopoietic cells. It plays important roles during embryonic development including pattern formation, cell aggregation and migration, segmentation, neural development, angiogenesis, and vascular network assembly. It is essential for vascular remodeling, maturation and directed growth. Its expression is restricted to venous endothelial cells.

### Specificity:

This antibody was selected for its ability to detect rhEphB4 in direct ELISAs and Western blots. In these formats, this antibody showed no cross-reactivity with other human EphB receptors or mouse EphB4. Its binding epitope is located in the N-terminal globular ligand-binding domain of the human EphB4.

### Applications:

**Western blot** - This antibody can be used at less than 1 µg/mL with the appropriate secondary antibodies to detect human EphB4. It detects both reducing and non-reducing EphB4 on Western. Chemiluminescent detection with SuperSignal West Femto Maximum Sensitivity Substrate (Thermo Fisher Scientific, Cat#: 34094) will increase sensitivity by more than 10-fold, therefore, need much low concentration of this antibody for Western.

**Direct ELISA** - This antibody can be used at 1µg/mL with the appropriate secondary antibodies to detect human EphB4 directly coated on an ELISA plate. The detection limit for rhEphB4 is less than 2 ng/well.

**Immunohistochemistry (IHC)** - Tested with fixed tissues at 10-100 ug/ml.

**Optimal dilutions should be determined by individuals for each application.**

### Review Papers

Holder N, Klein R. Eph receptors and ephrins: effectors of morphogenesis. *Development* 1999;126:2033–2044.

Dodelet VC, Pasquale EB. Eph receptors and ephrin ligands: embryogenesis to tumorigenesis. *Oncogene*. 2000; 19(49):5614-5619.

Pasquale EB. Eph-ephrin bidirectional signaling in physiology and disease. *Cell*. 2008 133(1):38-52.