3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Monoclonal Anti-Ephrin-B2, Clone EFR-163M
produced in mouse, purified immunoglobulin

Catalog Number **SAB4200120**

Product Description

Monoclonal Anti-Ephrin-B2 (mouse IgG1 isotype) is derived from the hybridoma EFR-163M produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a human Ephrin-B2 (GeneID: 1948) recombinant protein. The human protein shares 97% homology with the mouse protein. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Ephrin-B2 recognizes human Ephrin-B2. The antibody may be used in several immunochemical techniques including immunoblotting (~56 kDa).

Ephrin-B2 is a member of the ephrin (EPH) family. The ephrins and EPH-related receptors comprise the largest subfamily of receptor protein-tyrosine kinases and have been implicated in mediating developmental events, especially in the nervous system and in erythropoiesis. 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. Ephrin-B2 binds the tyrosine kinase receptors EphB4 and EphA3, and is expressed by arteries but not veins, whereas its receptor tyrosine kinase EphB4 is expressed by veins but not arteries. Ephrin-B2 and EphB4 are also essential for proper development of the cardiovascular system. Targeted null mutations in these genes cause embryonic lethality, accompanied by defects in angiogenic remodeling of the peripheral vasculature and defective myocardial trabeculation in the heart.[1-5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discard if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1.0 µg/mL is recommended using whole extracts of HEK-293T cells overexpressing a human Ephrin-B2 fusion protein.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Gerety, S.S., et al., *Mol. Cell*, **4**, 403-414 (1999).
2. Oike, Y., et al., *Blood*, **100**, 1326-1333 (2002).
3. Martinez, A. and Soriano, E., *Brain Res. Brain Res. Rev.*, **49**, 211-226 (2005).
4. Kuijper, S., et al., *Trends Cardiovasc. Med.*, **17**, 145-151 (2007).
5. McClelland, A.C., et al., *Proc. Natl. Acad. Sci. USA*, **106**, 20487-20492 (2009).

ST,KAA,PHC 06/10-1

Sigma brand products are sold through Sigma-Aldrich, Inc.
Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.