10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KRIT1 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP18206a

Specification

KRIT1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession O00522

KRIT1 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 889

Other Names
Krev interaction trapped protein 1, Krev interaction trapped 1, Cerebral cavernous malformations 1 protein, KRIT1, CCM1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

KRIT1 Antibody (N-term) Blocking Peptide - Protein Information

Name KRIT1

Synonyms CCM1

Function
Component of the CCM signaling pathway which is a crucial regulator of heart and vessel formation and integrity (By similarity). Negative regulator of angiogenesis. Inhibits endothelial proliferation, apoptosis, migration, lumen formation and sprouting angiogenesis in primary endothelial cells. Promotes AKT phosphorylation in a NOTCH- dependent and independent manner, and inhibits ERK1/2 phosphorylation indirectly through activation of the DELTA-NOTCH cascade. Acts in concert with CDH5 to establish and maintain correct endothelial cell polarity and vascular lumen and these effects are mediated by recruitment and activation of the Par polarity complex and RAP1B. Required for the localization of phosphorylated PRKCZ, PARD3, TIAM1 and RAP1B to the cell junction, and cell junction stabilization. Plays a role in integrin signaling via its interaction with ITGB1BP1; this prevents the interaction between ITGB1 and ITGB1BP1. Microtubule-associated protein that binds to phosphatidylinositol 4,5-bisphosphate (PIP2)-containing membranes in a GTP-bound RAP1-dependent manner. Plays an important role in the maintenance of the intracellular reactive oxygen species (ROS) homeostasis to prevent oxidative cellular damage. Regulates the homeostasis of intracellular ROS through an antioxidant pathway involving FOXO1 and SOD2. Facilitates the down-regulation of cyclin-D1 (CCND1) levels required for cell

transition from proliferative growth to quiescence by preventing the accumulation of intracellular ROS through the modulation of FOXO1 and SOD2 levels. May play a role in the regulation of macroautophagy through the down- regulation of the mTOR pathway (PubMed:26417067).

Cellular Location
Cytoplasm, cytoskeleton. Cell membrane; Peripheral membrane protein. Cell junction. Note=KRIT1 and CDH5 reciprocally regulate their localization to endothelial cell-cell junctions. Association with RAP1 relocalizes KRIT1 from microtubules to cell junction membranes. Translocates from the cytoplasm along microtubules to the cell membrane in a ITGB1BP1-dependent manner

Tissue Location
Low levels in brain. Very weak expression found in heart and muscle.

KRIT1 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

KRIT1 Antibody (N-term) Blocking Peptide - Images

KRIT1 Antibody (N-term) Blocking Peptide - Background

This gene encodes a protein containing four ankyrinrepeats, a band 4.1/ezrin/radixin/moesin (FERM) domain, andmultiple NPXY sequences. The encoded protein is localized in thenucleus and cytoplasm. It binds to integrin cytoplasmicdomain-associated protein-1 alpha (ICAP1alpha), and plays acritical role in beta1-integrin-mediated cell proliferation. Itassociates with junction proteins and RAS-related protein 1A(Rap1A), which requires the encoded protein for maintaining theintegrity of endothelial junctions. It is also amicrotubule-associated protein and may play a role in microtubuletargeting. Mutations in this gene result in cerebral cavernousmalformations. Multiple alternatively spliced transcript variantshave been found for this gene.

KRIT1 Antibody (N-term) Blocking Peptide - References

Reddy, S., et al. Graefes Arch. Clin. Exp. Ophthalmol. 248(9):1359-1361(2010)Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :Stockton, R.A., et al. J. Exp. Med. 207(4):881-896(2010)Petersen, T.A., et al. AJNR Am J Neuroradiol 31(2):377-382(2010)Lee, Y.W., et al. Ann. Clin. Lab. Sci. 40(3):290-294(2010)