

KD-Validated Anti-KRIT1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI2256

Product Information

Application	WB
Primary Accession	O00522
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB4350
Calculated MW	84348
Gene Name	KRIT1
Aliases	KRIT1; KRIT1 Ankyrin Repeat Containing; Krev Interaction Trapped 1; CCM1; CAM; Cerebral Cavernous Malformations 1 Protein; Krev Interaction Trapped Protein 1; Ankyrin Repeat-Containing Protein Krit1; Cerebral Cavernous Malformations 1; KRIT1, Ankyrin Repeat Containing
Immunogen	Recombinant protein of human KRIT1

Additional Information

Gene ID	889
Other Names	Krev interaction trapped protein 1, Krev interaction trapped 1, Cerebral cavernous malformations 1 protein, KRIT1, CCM1

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 relocates 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.