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VASH1 Antibody

Catalog # ASC11329

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q7L8A9
Other Accession	NP_055724, 7662454
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	40957
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	VASH1 antibody can be used for detection of VASH1 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	22846
Other Names	Vasohibin-1, VASH1, KIAA1036, VASH
Target/Specificity	VASH1; VASH1 antibody is predicted to not cross-react with other vasohibin protein family members. At least two isoforms are known to exist; this antibody will recognize only the long isoform.
Reconstitution & Storage	VASH1 antibody can be stored at 4 ℃, stable for one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	VASH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	VASH1 (HGNC:19964)
Function	Tyrosine carboxypeptidase that removes the C-terminal tyrosine residue of alpha-tubulin, thereby regulating microtubule dynamics and function (PubMed:29146869, PubMed:31171830, PubMed:31235910, PubMed:31235911, PubMed:31270470). Critical for spindle function and accurate chromosome segregation during mitosis since microtubule detyrosination regulates mitotic spindle length and postioning (PubMed:31171830). Acts as an angiogenesis inhibitor: inhibits migration, proliferation and network formation by endothelial cells as well as angiogenesis (PubMed:15467828, PubMed:16488400, PubMed:16707096,

PubMed:19204325). This inhibitory effect is selective to endothelial cells as it does not affect the migration of smooth muscle cells or fibroblasts (PubMed:15467828, PubMed:16488400, PubMed:16707096).

Cellular Location

Cytoplasm. Secreted. Note=Mainly localizes in the cytoplasm (PubMed:27879017). Some fraction is secreted via a non-canonical secretion system; interaction with SVBP promotes secretion (PubMed:27879017).

Tissue Location

Preferentially expressed in endothelial cells (PubMed:15467828, PubMed:16707096). Highly expressed in fetal organs (PubMed:15467828). Expressed in brain and placenta, and at lower level in heart and kidney (PubMed:15467828). Highly detected in microvessels endothelial cells of atherosclerotic lesions (PubMed:16707096)

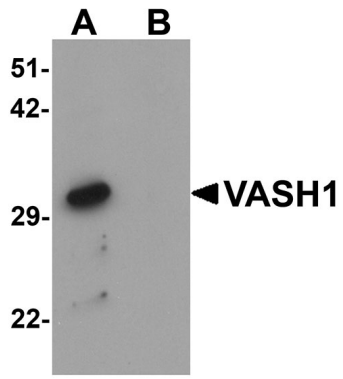
Background

VASH1 Antibody: VASH1 was originally identified as an endothelium-derived vascular endothelial growth factor (VEGF)-inducible angiogenesis inhibitor that acts in a negative feedback manner. VASH1 mRNA is expressed brain, heart, kidney and placenta in the adult, with robust expression in various organs during embryonic development. VASH1 expression in tumor cells and tumor vasculature is silenced by methylation by increased expression of Zeste homolog 2 (EZH2). The increase of EZH2 expression is induced by VEGF stimulation, leading to poor clinical prognosis. Recombinant adenovirus expressing VASH prevented tumor angiogenesis and inhibited tumor growth, suggesting that it may be a potentially valuable antitumor therapy in the clinic.

References

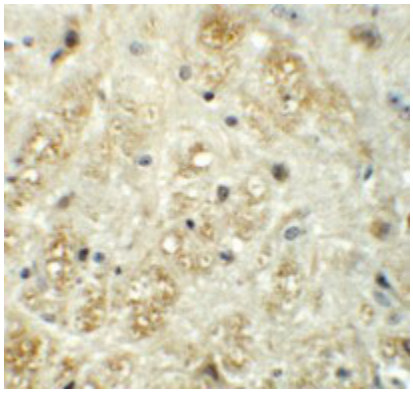
Watanabe K, Hasegawa Y, Yamashita H, et al. Vasohibin as an endothelium-derived negative feedback regulator of angiogenesis. J. Clin. Invest. 2004; 114:989-907
Lu C, Han HD, Mangala LS, et al. Regulation of tumor angiogenesis by EZH2. Cancer Cell 2010; 18:185-97.
Li D, Zhou K, Wang S, et al. Recombinant adenovirus encoding vasohibin prevents tumor angiogenesis and inhibits tumor growth. Cancer Sci. 2010; 101:448-52.

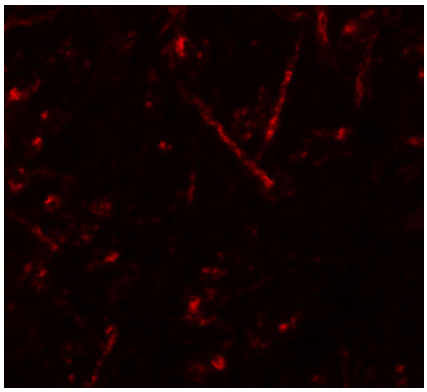
Images



Western blot analysis of VASH1 in human brain tissue lysate with VASH1 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.

Immunohistochemistry of VASH1 in mouse brain tissue with VASH1 antibody at 5 µg/mL.





Immunofluorescence of VASH1 in mouse brain tissue with VASH1 antibody at 20 µg/mL.

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