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VHL Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6549A

Product Information

Application	WB, FC, IF, IHC-P, E
Primary Accession	P40337
Other Accession	Q64259, P40338
Reactivity	Human, Rat, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	24153
Antigen Region	43-71

Additional Information

Gene ID	7428
Other Names	Von Hippel-Lindau disease tumor suppressor, Protein G7, pVHL, VHL
Target/Specificity	This VHL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 43-71 amino acids from the N-terminal region of human VHL.
Dilution	WB~~1:1000 FC~~1:25 IF~~1:25 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	VHL Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	VHL
Function	Involved in the ubiquitination and subsequent proteasomal degradation via the von Hippel-Lindau ubiquitination complex (PubMed:10944113, PubMed:17981124, PubMed:19584355). Seems to act as a target recruitment

	subunit in the E3 ubiquitin ligase complex and recruits hydroxylated hypoxia-inducible factor (HIF) under normoxic conditions (PubMed:10944113, PubMed:17981124). Involved in transcriptional repression through interaction with HIF1A, HIF1AN and histone deacetylases (PubMed:10944113, PubMed:17981124). Ubiquitinates, in an oxygen-responsive manner, ADRB2 (PubMed:19584355). Acts as a negative regulator of mTORC1 by promoting ubiquitination and degradation of RPTOR (PubMed:34290272).
Cellular Location	[Isoform 1]: Cytoplasm. Cell membrane; Peripheral membrane protein. Endoplasmic reticulum. Nucleus. Note=Found predominantly in the cytoplasm and with less amounts nuclear or membrane-associated (PubMed:9751722) Colocalizes with ADRB2 at the cell membrane (PubMed:19584355)
Tissue Location	Expressed in the adult and fetal brain and kidney.

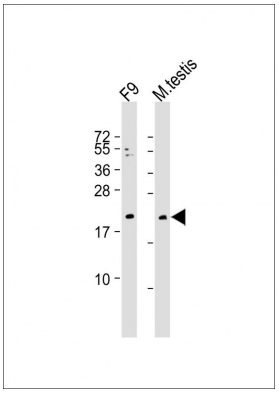
Background

Von Hippel-Lindau syndrome (VHL) is a dominantly inherited familial cancer syndrome predisposing to a variety of malignant and benign tumors. A germline mutation of VHL gene is the basis of familial inheritance of VHL syndrome. The protein is a component of the protein complex that includes elongin B, elongin C, and cullin-2, and possesses ubiquitin ligase E3 activity. This protein is involved in the ubiquitination and degradation of hypoxia-inducible-factor (HIF), which is a transcription factor that plays a central role in the regulation of gene expression by oxygen. RNA polymerase II subunit POLR2G/RPB7 is also reported to be a target of this protein.

References

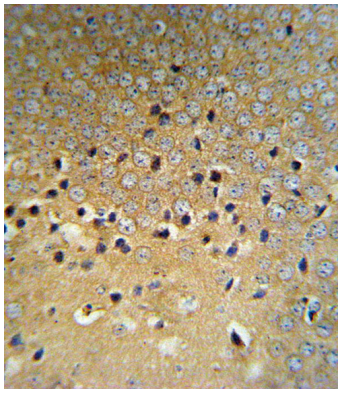
Olmos,G., Cell. Mol. Life Sci. 66 (13), 2167-2180 (2009) Hatzimichael,E., Clin Lymphoma Myeloma 9 (3), 239-242 (2009) Luu,V.D., Clin. Cancer Res. 15 (10), 3297-3304 (2009)

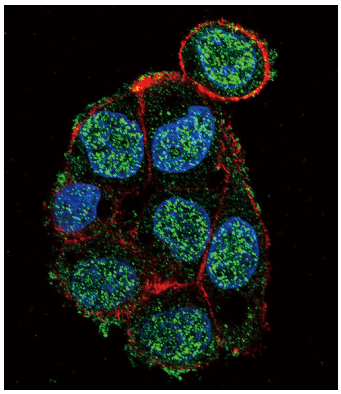
Images



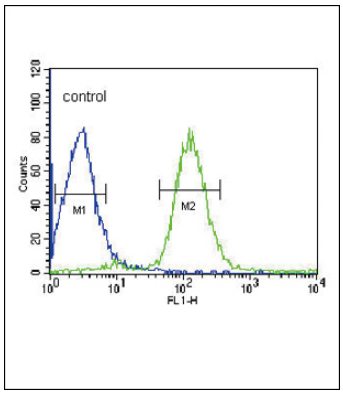
All lanes : Anti-VHL Antibody (N-term) at 1:500 dilution Lane 1: F9 whole cell lysate Lane 2: Mouse testis lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 24 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

VHL Antibody (N-term) (RB18667) IHC analysis in formalin fixed and paraffin embedded mouse brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the VHL Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.





Confocal immunofluorescent analysis of VHL Antibody (N-term)(Cat#AP6549a) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).



VHL Antibody (N-term) (Cat. #AP6549a) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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