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VHL, Biotinylated

Peptide-affinity purified goat antibody
Catalog # AF2146b

Product Information

Application	WB, Pep-ELISA
Primary Accession	P40337
Other Accession	NP_937799, 7428, 22346 (mouse), 24874 (rat)
Reactivity	Human, Mouse, Rat
Predicted	Dog
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Calculated MW	24153

Additional Information

Gene ID	7428
Other Names	Von Hippel-Lindau disease tumor suppressor, Protein G7, pVHL, VHL
Dilution	WB~~1:1000 Pep-ELISA~~N/A
Format	0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	VHL, Biotinylated 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 this gene is the basis of familial inheritance of VHL syndrome. The protein encoded by this gene 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. Alternatively spliced transcript variants encoding distinct isoforms have been observed.

References

Biomarkers Predicting Outcome in Patients with Advanced Renal Cell Carcinoma: Results from Sorafenib Phase III Treatment Approaches in Renal Cancer Global Evaluation Trial. Pe帽a C, et al. Clin Cancer Res, 2010 Sep 14. PMID 20651059. Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086. A Large-scale genetic association study of esophageal adenocarcinoma risk. Liu CY, et al. Carcinogenesis, 2010 Jul. PMID 20453000. Clinical and molecular features of familial and sporadic cases of von Hippel-Lindau disease from Mexico. Chacon-Camacho OF, et al. Clin Experiment Ophthalmol, 2010 Apr. PMID 20447124. VHL-gene deletion in single renal tubular epithelial cells and renal tubular cysts: further evidence for a cyst-dependent progression pathway of clear cell renal carcinoma in von Hippel-Lindau disease. Montani M, et al. Am J Surg Pathol, 2010 Jun. PMID 20431476.

Images

Biotinylated EB07333 (0.3 µg/ml) staining of Human Ovary lysate (35 µg protein in RIPA buffer), exactly mirroring its parental non-biotinylated product. Primary incubation was 1 hour. Detected by chemiluminescence, using streptavidin-HRP and using NAP block