SANTA CRUZ BIOTECHNOLOGY, INC.

VHL (D-11): sc-514907

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Individuals harboring germline mutations in the tumor suppressor gene von Hippel-Lindau (VHL) exhibit an increased susceptibility to a variety of tumors including renal carcinoma, hemangioblastoma of the central nervous system and pheochromocytoma. The Elongin (SIII) complex has been identified as the functional target of the VHL protein. Elongin (SIII) is a heterotrimer composed of a transcriptional active subunit designated Elongin A and two regulatory subunits designated Elongin B and Elongin C. VHL functions by binding to the Elongin B and C subunits, inhibiting the transcriptional efficacy of the Elongin (SIII) complex. Different isoforms of VHL have been observed, encoded by alternatively spliced transcript variants. The molecular weight of each isoform varies between species.

REFERENCES

1. Seizinger, B.R., et al. 1988. Von Hippel-Lindau disease maps to the region of chromosome 3 associated with renal cell carcinoma. Nature 332: 268-269.
2. Decker, H.J., et al. 1989. Loss of heterozygosity on 3p in a renal cell carcinoma in von Hippel-Lindau syndrome. Cancer Genet. Cytogenet. 39: 289-293.
3. Tory, K., et al. 1989. Specific genetic change in tumors associated with von Hippel-Lindau disease. J. Natl. Cancer Inst. 81: 1097-1101.
4. Garrett, K.P., et al. 1994. Molecular cloning of an essential subunit of RNA polymerase II elongation factor SIII. Proc. Natl. Acad. Sci. USA 91: 5237-5241.
5. Krumm, A., et al. 1995. Tumor suppression and transcription elongation: the dire consequences of changing partners. Science 269: 1400-1401.
6. Duan, D.R., et al. 1995. Inhibition of transcription elongation by the VHL tumor suppressor protein. Science 269: 1402-1406.
7. Aso, T., et al. 1995. Elongin (SIII): a multisubunit regulator of elongation by RNA polymerase II. Science 269: 1439-1443.
8. Gross, D.J., et al. 1996. Familial pheochromocytoma associated with a novel mutation in the von Hippel-Lindau gene. J. Clin. Endocrin. Metab. 81: 147-149.

CHROMOSOMAL LOCATION

Genetic locus: Vhl (mouse) mapping to 6 E3.

SOURCE

VHL (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 154-181 at the C-terminus of VHL of rat origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

VHL (D-11) is recommended for detection of VHL of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for VHL siRNA (m): sc-36817, VHL shRNA Plasmid (m): sc-36817-SH and VHL shRNA (m) Lentiviral Particles: sc-36817-V.

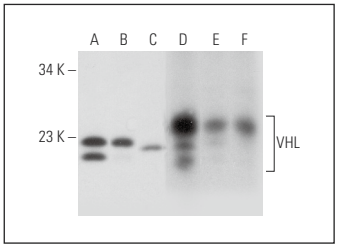
Molecular Weight of VHL isoforms: 18/24 kDa.

Positive Controls: KNRK nuclear extract: sc-2141, F9 cell lysate: sc-2245 or rat testis extract: sc-2400.

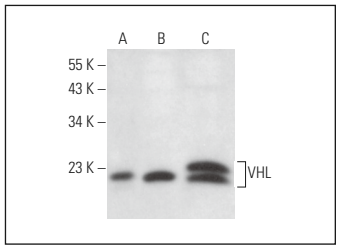
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



VHL (D-11): sc-514907. Western blot analysis of VHL expression in 3611-RF (**A**) and KNRK (**B**) nuclear extracts, F9 whole cell lysate (**C**) and rat testis (**D**), rat brain (**E**) and mouse brain (**F**) tissue extracts.



VHL (D-11): sc-514907. Western blot analysis of VHL expression in KNRK nuclear extract (**A**) and F9 (**B**) and C6 (**C**) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

CONJUGATES

See **VHL (D-7): sc-55506** for VHL antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.