SANTA CRUZ BIOTECHNOLOGY, INC.

VHL (G-7): sc-17780

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.

CHROMOSOMAL LOCATION

Genetic locus: VHL (human) mapping to 3p25.3; Vhl (mouse) mapping to 6 E3.

SOURCE

VHL (G-7) is a mouse monoclonal antibody raised against amino acids 1-181 of VHL of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VHL (G-7) is available conjugated to agarose (sc-17780 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17780 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17780 PE), fluorescein (sc-17780 FITC), Alexa Fluor® 488 (sc-17780 AF488), Alexa Fluor® 546 (sc-17780 AF546), Alexa Fluor® 594 (sc-17780 AF594) or Alexa Fluor® 647 (sc-17780 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17780 AF680) or Alexa Fluor® 790 (sc-17780 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

VHL (G-7) is recommended for detection of VHL of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-36816, VHL siRNA (m): sc-36817, VHL shRNA Plasmid (h): sc-36816-SH, VHL shRNA Plasmid (m): sc-36817-SH, VHL shRNA (h) Lentiviral Particles: sc-36816-V and VHL shRNA (m) Lentiviral Particles: sc-36817-V.

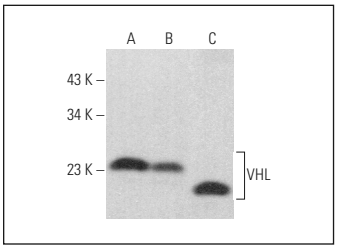
Molecular Weight of VHL isoforms: 18/24 kDa.

Positive Controls: F9 cell lysate: sc-2245, RAW 264.7 whole cell lysate: sc-2211 or Daudi cell lysate: sc-2415.

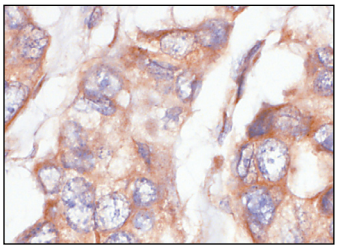
STORAGE

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

DATA



VHL (G-7): sc-17780. Western blot analysis of VHL expression in F9 (**A**), RAW 264.7 (**B**) and Daudi (**C**) whole cell lysates.



VHL (G-7): sc-17780. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Joung, E.J., et al. 2007. Capsaicin induces Heme Oxygenase-1 expression in Hep G2 cells via activation of PI3K-Nrf2 signaling: NAD(P)H:quinone oxidoreductase as a potential target. Antioxid. Redox Signal. 9: 2087-2098.
2. Tamburini, B.A., et al. 2010. Gene expression profiling identifies inflammation and angiogenesis as distinguishing features of canine hemangiosarcoma. BMC Cancer 10: 619.
3. Harasawa, M., et al. 2011. Analysis of mTOR inhibition-involved pathway in ovarian clear cell adenocarcinoma. Acta Histochem. Cytochem. 44: 113-118.
4. Jung, Y.S., et al. 2013. Loss of VHL promotes progerin expression, leading to impaired p14/ARF function and suppression of p53 activity. Cell Cycle 12: 2277-2290.
5. Yasuda, M., et al. 2015. Involvement of UTR-dependent gene expression in the maintenance of cancer stem cell like phenotypes. Oncol. Lett. 10: 3171-3176.
6. Gechijian, L.N., et al. 2018. Functional TRIM24 degrader via conjugation of ineffectual bromodomain and VHL ligands. Nat. Chem. Biol. 14: 405-412.
7. Mallikarjuna, P., et al. 2018. VHL status regulates transforming growth factor-β signaling pathways in renal cell carcinoma. Oncotarget 9: 16297-16310.
8. Jin, F., et al. 2019. HIF-1α-induced miR-23a~27a~24 cluster promotes colorectal cancer progression via reprogramming metabolism. Cancer Lett. 440-441: 211-222.
9. Hamilton, M.J., et al. 2019. HOTAIRM1 lncRNA is downregulated in clear cell renal cell carcinoma and inhibits the hypoxia pathway. Cancer Lett. 472: 50-58.

RESEARCH USE

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