

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human VHL in direct ELISA.
Source	Monoclonal Mouse IgG ₁ Clone # 1066402
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human VHL Asn150-Asp213 Accession # P40337
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

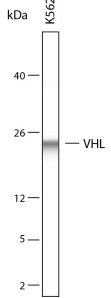
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.


	Recommended Concentration	Sample
Western Blot	2 µg/mL	K562 human chronic myelogenous leukemia cells and Daudi human Burkitt's lymphoma cells
Simple Western	20 µg/mL	K562 human chronic myelogenous leukemia cells

DATA

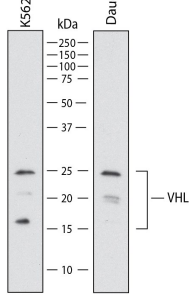
Simple Western



Detection of Human VHL by Simple Western™. Simple Western lane view shows lysates of K562 human chronic myelogenous leukemia cells, loaded at 0.2 mg/mL. A specific band was detected for VHL at approximately 23 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human VHL Monoclonal Antibody (Catalog # MAB11435). This experiment was conducted under reducing conditions and using the 2-40 kDa separation system.



Western Blot



Detection of Human VHL by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cells and Daudi human Burkitt's lymphoma cells. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human VHL Monoclonal Antibody (Catalog # MAB11435) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for VHL at approximately 17, 24 kDa (as indicated). This experiment was conducted under reducing conditions and using Western Blot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

VHL (von Hippel-Lindau disease tumor suppressor) is the substrate recognition subunit for an E3 ligase activity that ubiquitinates proteins containing hydroxyproline residues. Targets of VHL include HIF1α, β2 adrenergic receptor, ZHX2 and others. In VHL-box E3 Ubiquitin ligases, VHL is bound to a heterodimer complex composed of Elongin B (ELOB) and Elongin C (ELOC) through the "BC-box motif" found in many proteins in the VHL-box and SOCS-box protein families. ELOB/ELOC serves as an adapter between substrate recognition proteins and Cullin-2 (or Cullin-5) and RBX1 to form an active E3 ligase.

References:

1. Kamura T., *et al.* (1998) Genes & Dev. doi: 10.1101/gad.12.24.3872
2. Okumura F., *et al.* (2012) Front. Oncol. doi: 10.3389/fonc.2012.00010
3. Xie L., *et al.* (2009) Sci. Signaling doi: 10.1126/scisignal.2000444
4. Zhang J., *et al.* (2018) Science doi: 10.1126/science.aap8411