SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL20 (D-7): sc-515381

BACKGROUND

KLHL20 (Kelch-like 20), also known as KHLHX, KLEIP or KLHLX, is a 609 amino acid protein that is related to the *Drosophila* Kelch protein, which is required to maintain actin organization in ovarian ring canals. Mutations affecting Kelch function result in failure of Kelch to associate with the ring canals, causing subsequent female sterility. Human KLHL20 protein contains six Kelch repeats, one BACK (BTB/Kelch associated) domain and one BTB (POZ) domain. The BTB (broad-complex, tramtrack and bric a brac) domain, also known as the POZ (poxvirus and zinc finger) domain, is an N-terminal homodimerization domain that contains multiple copies of Kelch repeats and/or C_2H_2-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. KLHL20 is a probable substrate-specific adapter of an E3 ubiquitin-protein ligase complex, which mediates the ubiquitination and subsequent proteasomal degradation of target proteins.

REFERENCES

1. Albagli, O., et al. 1995. The BTB/POZ domain: a new protein-protein interaction motif common to DNA- and Actin-binding proteins. Cell Growth Differ. 6: 1193-1198.
2. Robinson, D.N. and Cooley, L. 1997. *Drosophila* Kelch is an oligomeric ring canal Actin organizer. J. Cell Biol. 138: 799-810.
3. Melnick, A., et al. 2000. In-depth mutational analysis of the promyelocytic leukemia zinc finger BTB/POZ domain reveals motifs and residues required for biological and transcriptional functions. Mol. Cell. Biol. 20: 6550-6567.

CHROMOSOMAL LOCATION

Genetic locus: KLHL20 (human) mapping to 1q25.1; Klhl20 (mouse) mapping to 1 H2.1.

SOURCE

KLHL20 (D-7) is a mouse monoclonal antibody raised against amino acids 468-557 mapping within an internal region of KLHL20 of human 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.

KLHL20 (D-7) is available conjugated to agarose (sc-515381 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515381 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515381 PE), fluorescein (sc-515381 FITC), Alexa Fluor® 488 (sc-515381 AF488), Alexa Fluor® 546 (sc-515381 AF546), Alexa Fluor® 594 (sc-515381 AF594) or Alexa Fluor® 647 (sc-515381 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515381 AF680) or Alexa Fluor® 790 (sc-515381 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

STORAGE

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

APPLICATIONS

KLHL20 (D-7) is recommended for detection of KLHL20 of mouse, rat and human 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 KLHL20 siRNA (h): sc-88301, KLHL20 siRNA (m): sc-146520, KLHL20 shRNA Plasmid (h): sc-88301-SH, KLHL20 shRNA Plasmid (m): sc-146520-SH, KLHL20 shRNA (h) Lentiviral Particles: sc-88301-V and KLHL20 shRNA (m) Lentiviral Particles: sc-146520-V.

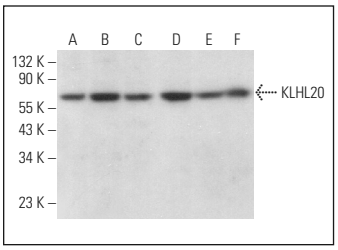
Molecular Weight of KLHL20: 68 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, PC-3 cell lysate: sc-2220 or FHs 173We cell lysate: sc-2417.

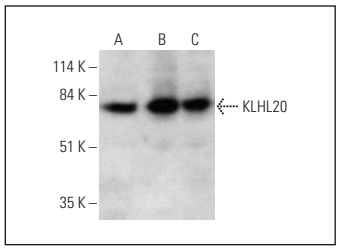
RECOMMENDED SUPPORT REAGENTS

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



KLHL20 (D-7): sc-515381. Western blot analysis of KLHL20 expression in PC-3 (**A**), U-251-MG (**B**), Caco-2 (**C**), F9 (**D**), HUV-EC-C (**E**) and K-562 (**F**) whole cell lysates.



KLHL20 (D-7): sc-515381. Western blot analysis of KLHL20 expression in FHs 173We (**A**), PC-3 (**B**) and SK-N-SH (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Iaconis, D., et al. 2020. The HOPS complex subunit VPS39 controls ciliogenesis through autophagy. Hum. Mol. Genet. 29: 1018-1029.
2. Li, X., et al. 2021. CUL3 (cullin 3)-mediated ubiquitination and degradation of BECN1 (beclin 1) inhibit autophagy and promote tumor progression. Autophagy. E-published.

RESEARCH USE

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