

KLHL5 (A-2): sc-515745

BACKGROUND

KLHL5, also known as kelch-like protein 5, is a 755 amino acid protein similar to the *Drosophila* kelch protein. Localized to the cytoskeleton, KLHL5 is expressed at higher levels in thyroid gland, adrenal gland and ovary and has lower expression in spinal cord, prostate, lymph node, trachea and testis. KLHL5 contains six kelch repeats 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 C₂H₂-type zinc fingers. Proteins that contain BTB domains are thought to be involved in transcriptional regulation via control of chromatin structure and function. KLHL5 is expressed as three isoforms produced by alternative splicing.

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.
4. Adams, J., et al. 2000. The kelch repeat superfamily of proteins: propellers of cell function. *Trends Cell Biol.* 10: 17-24.
5. Wang, S., et al. 2001. Cloning and characterization of KLHL5, a novel human gene encoding a kelch-related protein with a BTB domain. *Biochem. Genet.* 39: 227-238.

CHROMOSOMAL LOCATION

Genetic locus: KLHL5 (human) mapping to 4p14; Klhl5 (mouse) mapping to 5 C3.1.

SOURCE

KLHL5 (A-2) is a mouse monoclonal antibody raised against amino acids 58-144 mapping near the N-terminus of KLHL5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KLHL5 (A-2) is available conjugated to agarose (sc-515745 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515745 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515745 PE), fluorescein (sc-515745 FITC), Alexa Fluor® 488 (sc-515745 AF488), Alexa Fluor® 546 (sc-515745 AF546), Alexa Fluor® 594 (sc-515745 AF594) or Alexa Fluor® 647 (sc-515745 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515745 AF680) or Alexa Fluor® 790 (sc-515745 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

KLHL5 (A-2) is recommended for detection of KLHL5 isoforms 1-3 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 KLHL5 siRNA (h): sc-89298, KLHL5 siRNA (m): sc-146534, KLHL5 shRNA Plasmid (h): sc-89298-SH, KLHL5 shRNA Plasmid (m): sc-146534-SH, KLHL5 shRNA (h) Lentiviral Particles: sc-89298-V and KLHL5 shRNA (m) Lentiviral Particles: sc-146534-V.

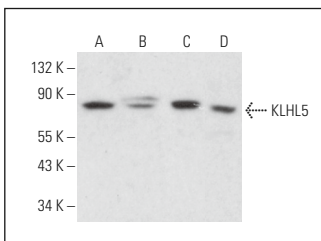
Molecular Weight of KLHL5: 84 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Jurkat whole cell lysate: sc-2204 or THP-1 cell lysate: sc-2238.

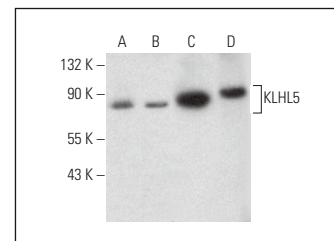
RECOMMENDED SUPPORT REAGENTS

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



KLHL5 (A-2): sc-515745. Western blot analysis of KLHL5 expression in HeLa (A), U-698-M (B), Neuro-2A (C) and NIH/3T3 (D) whole cell lysates.



KLHL5 (A-2): sc-515745. Western blot analysis of KLHL5 expression in THP-1 (A), Hep G2 (B) and Jurkat (C) whole cell lysates and human adrenal gland tissue extract (D).

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.