

KLHL31 (E-2): sc-514464

BACKGROUND

KLHL31, also known as kelch-like protein 31, BTB and kelch domain-containing protein 6, kelch-like protein KLHL or kelch repeat and BTB domain-containing protein 1, is a 634 amino acid protein similar to the *Drosophila* kelch protein. KLHL31 is expressed strongly in skeletal muscle and weakly in heart. KLHL31 contains one BACK (BTB/kelch associated) domain, which may indicate a role in substrate orientation in E3 ligase complexes. KLHL31 also 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.

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. 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.
3. Adams, J., et al. 2000. The kelch repeat superfamily of proteins: propellers of cell function. *Trends Cell Biol.* 10: 17-24.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610749. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Prag, S. and Adams, J.C. 2003. Molecular phylogeny of the kelch-repeat superfamily reveals an expansion of BTB/kelch proteins in animals. *BMC Bioinformatics* 4: 42.

CHROMOSOMAL LOCATION

Genetic locus: KLHL31 (human) mapping to 6p12.1; Klhl31 (mouse) mapping to 9 E1.

SOURCE

KLHL31 (E-2) is a mouse monoclonal antibody raised against amino acids 261-365 mapping within an internal region of KLHL31 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KLHL31 (E-2) is available conjugated to agarose (sc-514464 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514464 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514464 PE), fluorescein (sc-514464 FITC), Alexa Fluor® 488 (sc-514464 AF488), Alexa Fluor® 546 (sc-514464 AF546), Alexa Fluor® 594 (sc-514464 AF594) or Alexa Fluor® 647 (sc-514464 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514464 AF680) or Alexa Fluor® 790 (sc-514464 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

KLHL31 (E-2) is recommended for detection of KLHL31 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 KLHL31 siRNA (h): sc-95308, KLHL31 siRNA (m): sc-146530, KLHL31 shRNA Plasmid (h): sc-95308-SH, KLHL31 shRNA Plasmid (m): sc-146530-SH, KLHL31 shRNA (h) Lentiviral Particles: sc-95308-V and KLHL31 shRNA (m) Lentiviral Particles: sc-146530-V.

Molecular Weight of KLHL31: 70 kDa.

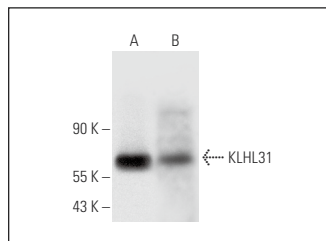
Positive Controls: A-10 cell lysate: sc-3806, Sol8 cell lysate: sc-2249 or human heart extract: sc-363763.

RECOMMENDED SUPPORT REAGENTS

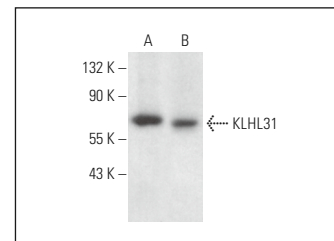
To ensure optimal results, the following support reagents are recommended:

- 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



KLHL31 (E-2): sc-514464. Western blot analysis of KLHL31 expression in human heart tissue extract (A) and Sol8 whole cell lysate (B).



KLHL31 (E-2): sc-514464. Western blot analysis of KLHL31 expression in Sol8 (A) and A-10 (B) 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.

PROTOCOLS

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

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