SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL3 (K-24): sc-133714

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The Power to Question

BACKGROUND

KLHL3 (kelch-like 3) is a 587 amino acid cytoplasmic protein that is ubiquitously expressed in a variety of tissues. Related to the *Drosophila* kelch protein, KLHL3 contains six kelch repeats and a BTB (POZ) domain. The BTB (broad-complex, tramtrack and bric a brac) domain, also known as the POZ (poxvirus and zinc finger) domain, is a 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. KLHL3 is suggested to be a probable substrate-specific adapter of an E3 ubiquitin-protein ligase complex, which mediates the ubiquitination and subsequent proteasomal degradation of target proteins. KLHL3 exists as three isoforms produced by alternative splicing events.

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. Lai, F., et al. 2000. Molecular characterization of KLHL3, a human homologue of the *Drosophila* kelch gene. Genomics 66: 65-75.
4. Adams, J., et al. 2000. The kelch repeat superfamily of proteins: propellers of cell function. Trends Cell Biol. 10: 17-24.
5. Lai, F., et al. 2001. Transcript map and comparative analysis of the 1.5-Mb commonly deleted segment of human 5q31 in malignant myeloid diseases with a del(5q). Genomics 71: 235-245.
6. Braybrook, C., et al. 2001. Identification and characterization of KLHL4, a novel human homologue of the *Drosophila* kelch gene that maps within the X-linked cleft palate and ankyloglossia (CPX) critical region. Genomics 72: 128-136.
7. 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.
8. Stogios, P.J. and Prive, G.G. 2004. The BACK domain in BTB-kelch proteins. Trends Biochem. Sci. 29: 634-637.
9. Gorjánácz, M., et al. 2006. Domains of Importin α2 required for ring canal assembly during *Drosophila* oogenesis. J. Struct. Biol. 154: 27-41.

CHROMOSOMAL LOCATION

Genetic locus: KLHL3 (human) mapping to 5q31.2.

SOURCE

KLHL3 (K-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic KLHL3 peptide of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

KLHL3 (K-24) is recommended for detection of KLHL3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KLHL3 siRNA (h): sc-91638, KLHL3 shRNA Plasmid (h): sc-91638-SH and KLHL3 shRNA (h) Lentiviral Particles: sc-91638-V.

Molecular Weight (predicted) of KLHL3: 65 kDa.

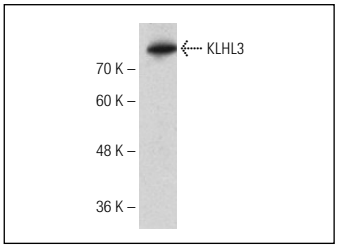
Molecular Weight (observed) of KLHL3: 78 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



KLHL3 (K-24): sc-133714. Western blot analysis of KLHL3 expression in Hep G2 whole cell lysate.

STORAGE

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

PROTOCOLS

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