SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL13 (Y-12): sc-138378

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The Power to Question

BACKGROUND

KLHL13 (kelch-like 13), also known as BKLHD2 (BTB and kelch domain-containing protein 2), is a 604 amino acid protein that contains 6 kelch repeats and one BTB/POZ domain. Expressed predominantly in brain, KLHL13 is believed to play a role in protein ubiquitination and may function as a substrate-specific adapter of an E3 ubiquitin-protein ligase complex. E3 ligases accept a ubiquitin residue from an E2 ubiquitin-conjugating enzyme and immediately transfer that residue to a protein that is targeted for degradation. Specifically, KLHL13 interacts with KLHL9 and CUL-3, a member of the cullin family of mediators that participate in the selective targeting of proteins for ubiquitin-mediated proteolysis. Via its BTB and C-terminal kelch (BACK) motif, KLHL13 is thought to play a role in spatially orientating substrates in the CUL-3 ligase.

REFERENCES

1. Singer, J.D., et al. 1999. Cullin-3 targets cyclin E for ubiquitination and controls S phase in mammalian cells. Genes Dev. 13: 2375-2387.
2. Tyers, M., et al. 1999. One ring to rule a superfamily of E3 ubiquitin ligases. Science 284: 601, 603-604.
3. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300655. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Morrow, C.J., et al. 2005. Bub1 and aurora B cooperate to maintain BubR1-mediated inhibition of APC/CCdc20. J. Cell Sci. 118: 3639-3652.
6. Sumara, I., et al. 2007. A Cul3-based E3 ligase regulates mitosis and is required to maintain the spindle assembly checkpoint in human cells. Cell Cycle 6: 3004-3010.

CHROMOSOMAL LOCATION

Genetic locus: KLHL13 (human) mapping to Xq24; Klhl13 (mouse) mapping to X A2.

SOURCE

KLHL13 (Y-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of KLHL13 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-138378 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

KLHL13 (Y-12) is recommended for detection of KLHL13 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with murine KLHL9.

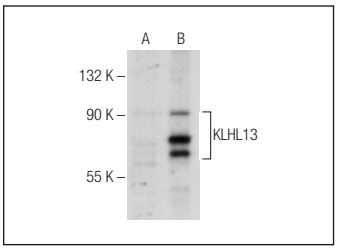
KLHL13 (Y-12) is also recommended for detection of KLHL13 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for KLHL13 siRNA (h): sc-91014, KLHL13 siRNA (m): sc-146514, KLHL13 shRNA Plasmid (h): sc-91014-SH, KLHL13 shRNA Plasmid (m): sc-146514-SH, KLHL13 shRNA (h) Lentiviral Particles: sc-91014-V and KLHL13 shRNA (m) Lentiviral Particles: sc-146514-V.

Molecular Weight of KLHL13: 68 kDa.

Positive Controls: KLHL13 (h): 293T Lysate: sc-116910 or Jurkat whole cell lysate: sc-2204.

DATA



KLHL13 (Y-12): sc-138378. Western blot analysis of KLHL13 expression in non-transfected: sc-117752 (**A**) and human KLHL13 transfected: sc-116910 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **KLHL9/13 (D-4): sc-166486**, our highly recommended monoclonal alternative to KLHL13 (Y-12).