SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL9/13 (H-286): sc-99119

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The Power to Question

BACKGROUND

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. KLHL9 (kelch-like 9) is a 617 amino acid protein containing one BACK (BTB/kelch associated) domain, 6 kelch repeats and a BTB/POZ domain. KLHL13 (kelch-like 13), also known as BKLHD2, is a 604 amino acid protein that contains 6 kelch repeats and one BTB/POZ domain. KLHL9 and KLHL13 are believed to play a role in protein ubiquitination and may function as a substrate-specific adapters of an E3 ubiquitin-protein ligase complex with CUL-3. 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.

REFERENCES

1. Singer, J.D., Gurian-West, M., Clurman, B. and Roberts, J.M. 1999. Cullin-3 targets cyclin E for ubiquitination and controls S phase in mammalian cells. Genes Dev. 13: 2375-2387.
2. Tyers, M. and Willems, A.R. 1999. One ring to rule a superfamily of E3 ubiquitin ligases. Science 284: 601, 603-604.
3. Nagase, T., Kikuno, R., Ishikawa, K.I., Hirosawa, M. and Ohara, O. 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., Tighe, A., Johnson, V.L., Scott, M.I., Ditchfield, C. and Taylor, S.S. 2005. Bub1 and aurora B cooperate to maintain BubR1-mediated inhibition of APC/CCdc20. J. Cell Sci. 118: 3639-3652.
6. Sumara, I. and Peter, M. 2007. A CUL-3-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: KLHL9 (human) mapping to 9p21.3, KLHL13 (human) mapping to Xq24; Klhl9 (mouse) mapping to 4 C4, Klhl13 (mouse) mapping to X A2.

SOURCE

KLHL9/13 (H-286) is a rabbit polyclonal antibody raised against amino acids 329-614 mapping near the C-terminus of KLHL9 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

KLHL9/13 (H-286) is recommended for detection of KLHL9 and KLHL13 of mouse, rat and 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)], 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).

KLHL9/13 (H-286) is also recommended for detection of KLHL9 and KLHL13 in additional species, including equine, canine, bovine, porcine and avian.

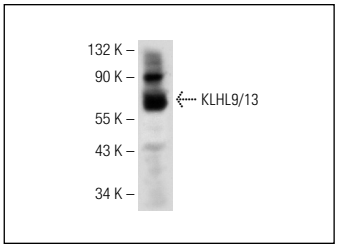
Molecular Weight of KLHL9/13: 68 kDa.

Positive Controls: mouse testis extract: sc-2405, HeLa whole cell lysate: sc-2200 or ES-2 cell lysate: sc-24674.

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



KLHL9/13 (H-286): sc-99119. Western blot analysis of KLHL9/13 expression in mouse testis tissue extract.

STORAGE

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