SANTA CRUZ BIOTECHNOLOGY, INC.

KLHL7 (A-15): sc-243219

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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. KLHL7 (Kelch-like protein 7) is a 586 amino acid protein that contains one BTB (POZ) domain and 6 kelch repeats. Localizing to the nucleus, KLHL7 is widely expressed, with high levels found in the central nervous system, testis, and adult and fetal heart. Existing as four alternatively spliced isoforms, the gene encoding KLHL7 maps to human chromosome 7p15.3 and mouse chromosome 5 A3; defects to this gene have been linked to retinitis pigmentosa type 42 (RP42). RP42 is a disorder characterized by night vision blindness and loss of midperipheral visual field.

REFERENCES

1. Bredholt, G., Storstein, A., Haugen, M., Krossnes, B.K., Husebye, E., Knappskog, P. and Vedeler, C.A. 2006. Detection of autoantibodies to the BTB-kelch protein KLHL7 in cancer sera. Scand. J. Immunol. 64: 325-335.
2. Friedman, J.S., Ray, J.W., Waseem, N., Johnson, K., Brooks, M.J., Hugosson, T., Breuer, D., Branham, K.E., Krauth, D.S., Bowne, S.J., Sullivan, L.S., Ponjavic, V., Gränse, L., Khanna, R., Trager, E.H., Gieser, L.M., et al. 2009. Mutations in a BTB-Kelch protein, KLHL7, cause autosomal-dominant retinitis pigmentosa. Am. J. Hum. Genet. 84: 792-800.
3. Hugosson, T., Friedman, J.S., Ponjavic, V., Abrahamson, M., Swaroop, A. and Andrɛasson, S. 2010. Phenotype associated with mutation in the recently identified autosomal dominant retinitis pigmentosa KLHL7 gene. Arch. Ophthalmol. 128: 772-778.
4. Wen, Y., Locke, K.G., Klein, M., Bowne, S.J., Sullivan, L.S., Ray, J.W., Daiger, S.P., Birch, D.G. and Hughbanks-Wheaton, D.K. 2011. Phenotypic characterization of 3 families with autosomal dominant retinitis pigmentosa due to mutations in KLHL7. Arch. Ophthalmol. 129: 1475-1482.
5. Kigoshi, Y., Tsuruta, F. and Chiba, T. 2011. Ubiquitin ligase activity of Cul3-KLHL7 protein is attenuated by autosomal dominant retinitis pigmentosa causative mutation. J. Biol. Chem. 286: 33613-33621.

CHROMOSOMAL LOCATION

Genetic locus: KLHL7 (human) mapping to 7p15.3; Klhl7 (mouse) mapping to 5 A3.

SOURCE

KLHL7 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KLHL7 of human origin.

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.

PRODUCT

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

Blocking peptide available for competition studies, sc-243219 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KLHL7 (A-15) is recommended for detection of KLHL7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other KLHL family members.

KLHL7 (A-15) is also recommended for detection of KLHL7 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KLHL7 siRNA (h): sc-89578, KLHL7 siRNA (m): sc-146536, KLHL7 shRNA Plasmid (h): sc-89578-SH, KLHL7 shRNA Plasmid (m): sc-146536-SH, KLHL7 shRNA (h) Lentiviral Particles: sc-89578-V and KLHL7 shRNA (m) Lentiviral Particles: sc-146536-V.

Molecular Weight of KLHL7 isoforms 1-4: 66/64/19/16 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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