SANTA CRUZ BIOTECHNOLOGY, INC.

YSK4 (T-12): sc-137944

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The Power to Question

BACKGROUND

YSK4 (YSK4 Sps1/Ste20-related kinase homolog *(S. cerevisiae)),* also known as RCK (regulated in COPD, protein kinase), is a 1,328 amino acid protein that belongs to the STE Ser/Thr protein kinase family, STE20 subfamily and protein kinase superfamily. Containing one protein kinase domain, YSK4 exists as six alternatively spliced isoforms that are encoded by a gene that maps to human chromosome 2 and mouse chromosome 1. Human chromosome 2 consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome, is due to mutations in the ALMS1 gene.

REFERENCES

1. Osada, S., et al. 1997. YSK1, a novel mammalian protein kinase structurally related to Ste20 and SPS1, but is not involved in the known MAPK pathways. Oncogene 14: 2047-2057.
2. Patel, S.B., et al. 1998. Mapping a gene involved in regulating dietary cholesterol absorption. The sitosterolemia locus is found at chromosome 2p21. J. Clin. Invest. 102: 1041-1044.
3. Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. J. Med. Genet. 37: E8.
4. Shulenin, S., et al. 2001. An ATP-binding cassette gene (ABCG5) from the ABCG (White) gene subfamily maps to human chromosome 2p21 in the region of the Sitosterolemia locus. Cytogenet. Cell Genet. 92: 204-208.
5. Hearn, T., et al. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. Nat. Genet. 31: 79-83.
6. Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. Am. J. Hum. Genet. 76: 794-803.
7. Greenman, C., et al. 2007. Patterns of somatic mutation in human cancer genomes. Nature 446: 153-158.

CHROMOSOMAL LOCATION

Genetic locus: YSK4 (human) mapping to 2q21.3; Ysk4 (mouse) mapping to 1 E3.

SOURCE

YSK4 (T-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of YSK4 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-137944 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

YSK4 (T-12) is recommended for detection of YSK4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), 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); non cross-reactive with family member YSK1.

Suitable for use as control antibody for YSK4 siRNA (h): sc-94840, YSK4 siRNA (m): sc-155420, YSK4 shRNA Plasmid (h): sc-94840-SH, YSK4 shRNA Plasmid (m): sc-155420-SH, YSK4 shRNA (h) Lentiviral Particles: sc-94840-V and YSK4 shRNA (m) Lentiviral Particles: sc-155420-V.

Molecular Weight of YSK4 isoforms: 151/127/138/53/58/19 kDa.

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) 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

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 or our catalog for detailed protocols and support products.