SANTA CRUZ BIOTECHNOLOGY, INC.

# KCTD3 (N-15): sc-164721

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

KCTD3 (BTB/POZ domain-containing protein KCTD3), also known as NY-REN-45, is an 815 amino acid protein belonging to the KCTD3 family. Containing a BTB (POZ) domain and five WD repeats, KCTD3 is broadly expressed in normal tissue. KCTD3 reacts with a small percentage of cancer patient's sera, while no reactivity occurs with normal sera, and renal cancer patients have a higher probability of expressing antibodies against KCTD3. Existing as three alternatively spliced isoforms, the gene encoding KCTD3 maps to human chromosome 1q41 and mouse chromosome 1 H6. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

## REFERENCES


1. Eudy, J.D., et al. 1998. Isolation of a gene encoding a novel member of the nuclear receptor superfamily from the critical region of Usher syndrome type IIa at 1q41. Genomics 50: 382-384.
2. Scanlan, M.J., et al. 1999. Antigens recognized by autologous antibody in patients with renal-cell carcinoma. Int. J. Cancer 83: 456-464.
3. Bowling, E.L., et al. 2000. The Stickler syndrome: case reports and literature review. Optometry 71: 177-182.
4. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
5. Oliveira, S.A., et al. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. Am. J. Hum. Genet. 77: 252-264.
6. Yokoi, T., et al. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. Graefes Arch. Clin. Exp. Ophthalmol. 247: 715-718.
7. Poot, M., et al. 2010. Disruption of CNTNAP2 and additional structural genome changes in a boy with speech delay and autism spectrum disorder. Neurogenetics 11: 81-89.


## CHROMOSOMAL LOCATION

Genetic locus: KCTD3 (human) mapping to 1q41; Kctd3 (mouse) mapping to 1 H6.

## SOURCE

KCTD3 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KCTD3 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.

Blocking peptide available for competition studies, sc-164721 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

KCTD3 (N-15) is recommended for detection of KCTD3 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 KCTD family members.

KCTD3 (N-15) is also recommended for detection of KCTD3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for KCTD3 siRNA (h): sc-88021, KCTD3 siRNA (m): sc-146394, KCTD3 shRNA Plasmid (h): sc-88021-SH, KCTD3 shRNA Plasmid (m): sc-146394-SH, KCTD3 shRNA (h) Lentiviral Particles: sc-88021-V and KCTD3 shRNA (m) Lentiviral Particles: sc-146394-V.

Molecular Weight of KCTD3: 89 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.

## SELECT PRODUCT CITATIONS


1. Cao-Ehlker, X., et al. 2013. Up-regulation of hyperpolarization-activated cyclic nucleotide-gated channel 3 (HCN3) by specific interaction with $K^+$ channel tetramerization domain-containing protein 3 (KCTD3). J. Biol. Chem. 288: 7580-7589.
2. Michalakis, S., et al. 2013. Characterization of neurite outgrowth and ectopic synaptogenesis in response to photoreceptor dysfunction. Cell. Mol. Life Sci. 70: 1831-1847.


## 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.