SANTA CRUZ BIOTECHNOLOGY, INC.

DC2 (N-18): sc-240293

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DC2, also known as OSTC (oligosaccharyltransferase complex subunit) or hydrophobic protein HSF-28, is a 149 amino acid multi-pass membrane protein belonging to the OSTC family. Conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, *Arabidopsis thaliana* and rice, DC2 is a component of the oligosaccharyltransferase (OST) complex and participates in dolichyl-diphosphooligosaccharide-protein glycotransferase activity. The gene that encodes DC2 maps to human chromosome 4q25. Representing approximately 6% of the human genome, chromosome 4 contains nearly 900 genes. Huntington's disease, thanatophoric dwarfism, achondroplasia, Muenke syndrome, bladder cancer, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease are all associated with chromosome 4. Containing the largest gene deserts (genome regions without protein encoding genes), chromosome 4 exhibits one of the two lowest recombination frequencies of the human chromosomes.

REFERENCES

1. Shibatani, T., et al. 2005. Proteomic analysis of mammalian oligosaccharyltransferase reveals multiple subcomplexes that contain Sec61, TRAP, and two potential new subunits. Biochemistry 44: 5982-5992.
2. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
3. Cowan, C.M., et al. 2006. Selective neuronal degeneration in Huntington's disease. Curr. Top. Dev. Biol. 75 : 25-71.
4. Chavan, M., et al. 2006. The molecular basis of coupling of translocation and N-glycosylation. Trends Biochem. Sci. 31: 17-20.
5. Versteegh, F.G., et al. 2007. Growth hormone analysis and treatment in Ellis-van Creveld syndrome. Am. J. Med. Genet. A 143A: 2113-2121.
6. Doherty, E.S., et al. 2007. Muenke syndrome (FGFR3-related craniosynostosis): expansion of the phenotype and review of the literature. Am. J. Med. Genet. A 143A: 3204-3215.
7. Stack, E.C., et al. 2007. Neuroprotective effects of synaptic modulation in Huntington's disease R6/2 mice. J. Neurosci. 27: 12908-12915.

CHROMOSOMAL LOCATION

Genetic locus: OSTC (human) mapping to 4q25; Ostc (mouse) mapping to 3 G3.

SOURCE

DC2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of DC2 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-240293 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DC2 (N-18) is recommended for detection of DC2 of human origin and Ostc of mouse and rat 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); non cross-reactive with DC2L.

DC2 (N-18) is also recommended for detection of DC2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for DC2 siRNA (h): sc-88880, Ostc siRNA (m): sc-108659, DC2 shRNA Plasmid (h): sc-88880-SH, Ostc shRNA Plasmid (m): sc-108659-SH, DC2 shRNA (h) Lentiviral Particles: sc-88880-V and Ostc shRNA (m) Lentiviral Particles: sc-108659-V.

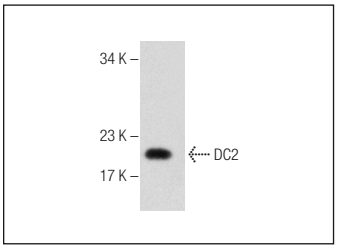
Molecular Weight of DC2: 17 kDa.

Positive Controls: Human liver tissue extract.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DC2 (N-18): sc-240293. Western blot analysis of DC2 expression in human liver tissue extract.

PROTOCOLS

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