

DSCR 4 (D-20): sc-14283

BACKGROUND

An extra copy of the smallest human autosome chromosome 21 results in Down Syndrome. The Down Syndrome Critical Region (DSCR) maps specifically to chromosome 21q22.2 and includes several genes which are likely associated with the pathogenesis of Down Syndrome. The genes DSCR 4, DSCR 5 and DSCR 6 differ in tissue expression and size. The gene DSCR 4 encodes a large open reading frame of 118 amino acid residues with a unique sequence. Expression of DSCR 4 mRNA occurs in the placenta as well as in adult cardiac and skeletal muscle. There are several splice variants of DSCR 5 and the mRNA of DSCR 5 is expressed in fetal liver and adult testis. Alternative splicing in DSCR 6 leads to four transcripts labeled DSCR 6a, DSCR 6b, DSCR 6c, and DSCR 6d. The DSCR 6 gene is the most centromeric gene, and its mRNA is expressed in the brain and kidney. Other genes in the DSCR family include tetratricopeptide repeat domain 3 (TTC3) and DSCR3.

REFERENCES

1. Tsukahara, F., Hattori, M., Muraki, T. and Sakaki, Y. 1996. Identification and cloning of a novel cDNA belonging to tetratricopeptide repeat gene family from Down Syndrome-critical region 21q22.2. *J. Biochem.* 120: 820-827.
2. Ohira, M., Ootsuyama, A., Suzuki, E., Ichikawa, H., Seki, N., Nagase, T., Nomura, N. and Ohki, M. 1996. Identification of a novel human gene containing the tetratricopeptide repeat domain from the Down Syndrome region of chromosome 21. *DNA Res.* 29: 9-16.
3. Nakamura, A., Hattori, M. and Sakaki, Y. 1997. A novel gene isolated from human placenta located in Down Syndrome critical region on chromosome 21. *DNA Res.* 4: 321-334.
4. Nakamura, A., Hattori, M. and Sakaki, Y. 1997. Isolation of a novel human gene from the Down Syndrome critical region of chromosome 21q22.2. *J. Biochem.* 122: 872-877
5. Togashi, T., Choi, D.K., Taylor, T.D., Suzuki, Y., Sugano, S., Hattori, M. and Sakaki, Y. 2000. A novel gene, DSCR 5, from the distal Down Syndrome critical region on chromosome 21q22.2. *DNA Res.* 7: 207-212.
6. Shibuya, K., Kudoh, J., Minoshima, S., Kawasaki, K., Asakawa, S. and Shimizu, N. 2000. Isolation of two novel genes, DSCR 5 and DSCR 6, from Down Syndrome critical region on human chromosome 21q22.2. *Biochem. Biophys. Res. Commun.* 271: 693-698.
7. Hattori, M., et al. 2000. The DNA sequence of human chromosome 21. The chromosome 21 mapping and sequencing consortium. *Nature* 405: 311-339.

SOURCE

DSCR 4 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DSCR 4 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.

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-14283 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DSCR 4 (D-20) is recommended for detection of DSCR 4 of 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).

Suitable for use as control antibody for DSCR 4 siRNA (h): sc-40496, DSCR 4 shRNA Plasmid (h): sc-40496-SH and DSCR 4 shRNA (h) Lentiviral Particles: sc-40496-V.

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.

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.