

CDRT1 (S-20): sc-323736

BACKGROUND

CDRT1 (CMT1A duplicated region transcript 1), also known as HREP or SM25H2, is a 752 amino acid protein that contains 4 WD repeats and is expressed in skeletal muscle, heart and pancreas. Existing as two alternatively spliced isoforms, CDRT1 is encoded by a gene that maps to human chromosome 17 in a region close in proximity to a binary repeat element that is duplicated in Charcot-Marie-Tooth disease type I (CMT1A) or deleted in Hereditary neuropathy (HNPP). Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, and is linked to predisposition of cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

- Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
- Kennerson, M.L., et al. 1995. Single test for two hereditary neuropathies, CMT1A and HNPP. *Clin. Chem.* 41: 1534-1535.
- Kennerson, M.L., et al. 1997. The Charcot-Marie-Tooth binary repeat contains a gene transcribed from the opposite strand of a partially duplicated region of the COX10 gene. *Genomics* 46: 61-69.
- Evans, S.C. and Lozano, G. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. *Mol. Med. Today* 3: 390-395.
- Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. *Oncogene* 14: 865-871.
- Kersemakers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. *Br. J. Cancer* 77: 192-200.
- Kennerson, M.L., et al. 1998. Genomic structure and physical mapping of C17orf1: a gene associated with the proximal element of the CMT1A-REP binary repeat. *Genomics* 53: 110-112.
- Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
- Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.

CHROMOSOMAL LOCATION

Genetic locus: CDRT1 (human) mapping to 17p12.

SOURCE

CDRT1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CDRT1 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-323736 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CDRT1 (S-20) is recommended for detection of CDRT1 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); non cross-reactive with other CDRT family members.

Suitable for use as control antibody for CDRT1 siRNA (h): sc-93931, CDRT1 shRNA Plasmid (h): sc-93931-SH and CDRT1 shRNA (h) Lentiviral Particles: sc-93931-V.

Molecular Weight of CDRT1 isoforms: 85/28 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.

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.