

UNCL (N-16): sc-244579

BACKGROUND

UNCL (uncoordinated-like protein), also known as UNC50, URP, GMH1 or PDLs22 (periodontal ligament-specific protein 22), is a 259 amino acid multi-pass membrane protein that belongs to the unc-50 family and is present in periodontal ligament fibroblasts. While it binds RNA, UNCL may be involved in cell surface expression of neuronal nicotinic receptors. The gene that encodes UNCL consists of nearly 10,000 bases and maps to human chromosome 2q11.2. Consisting of 237 million bases, chromosome 2 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 ichthyosis, 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. 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.
2. Fitzgerald, J., et al. 2000. UNCL, the mammalian homologue of UNC-50, is an inner nuclear membrane RNA-binding protein. *Brain Res.* 877: 110-123.
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. Horvath, J.E., et al. 2005. Punctuated duplication seeding events during the evolution of human chromosome 2p11. *Genome Res.* 15: 914-927.
8. Kim, H.J., et al. 2007. Expression of UNCL during development of periodontal tissue and response of periodontal ligament fibroblasts to mechanical stress *in vivo* and *in vitro*. *Cell Tissue Res.* 327: 25-31.

CHROMOSOMAL LOCATION

Genetic locus: UNC50 (human) mapping to 2q11.2; Unc50 (mouse) mapping to 1 B.

SOURCE

UNCL (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of UNCL of human origin.

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-244579 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

UNCL (N-16) is recommended for detection of UNCL 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).

UNCL (N-16) is also recommended for detection of UNCL in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for UNCL siRNA (h): sc-94346, UNCL siRNA (m): sc-154924, UNCL shRNA Plasmid (h): sc-94346-SH, UNCL shRNA Plasmid (m): sc-154924-SH, UNCL shRNA (h) Lentiviral Particles: sc-94346-V and UNCL shRNA (m) Lentiviral Particles: sc-154924-V.

Molecular Weight of UNCL: 30 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.

PROTOCOLS

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