

Opalin (S-14): sc-163189

BACKGROUND

Opalin, also known as HTMP10, oligodendrocytic myelin paranodal and inner loop protein or TMEM10 (transmembrane protein 10), is a 141 amino acid single-pass type I membrane protein that is expressed specifically in oligodendrocytes of brain. The gene encoding Opalin maps to human chromosome 10q24.1. Spanning nearly 135 million base pairs, chromosome 10 makes up approximately 4.5% of total DNA in cells and encodes nearly 1,200 genes. Several protein-coding genes, including those that encode for chemokines, cadherins, excision repair proteins, early growth response factors (Egrs) and fibroblast growth receptors (FGFRs), are located on chromosome 10. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

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3. Berger, P., et al. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
4. Teresi, R.E., et al. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
5. Aruga, J., et al. 2007. An oligodendrocyte enhancer in a phylogenetically conserved intron region of the mammalian myelin gene Opalin. *J. Neurochem.* 102: 1533-1547.
6. Yoshikawa, F., et al. 2008. Opalin, a transmembrane sialoglycoprotein located in the central nervous system myelin paranodal loop membrane. *J. Biol. Chem.* 283: 20830-20840.
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CHROMOSOMAL LOCATION

Genetic locus: OPALIN (human) mapping to 10q24.1.

SOURCE

Opalin (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Opalin 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-163189 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Opalin (S-14) is recommended for detection of Opalin 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 Opalin siRNA (h): sc-90734, Opalin shRNA Plasmid (h): sc-90734-SH and Opalin shRNA (h) Lentiviral Particles: sc-90734-V.

Molecular Weight of Opalin: 16 kDa.

Molecular Weight of glycosylated Opalin: 34-39 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.