

## PATJ (G-19): sc-23242

### BACKGROUND

The membranes of myelinating Schwann cells are joined by tight, gap and adherens junctions, all of which are found in regions of noncompact myelin: the paranodal loops, incisures of Schmidt-Lanterman and mesaxons. Tight junctions help establish polarity in mammalian epithelia by forming a physical barrier that separates apical and basolateral membranes. Pals-associated tight junction protein (PATJ), the human homolog of *Drosophila* Discs Lost, is differentially localized in myelinating Schwann cells. PATJ associates with Claudin-1, CRB1 (a transmembrane protein that plays a role in epithelial cell polarity and photoreceptor development), and Pals1 (a Lin-7 associated protein). The PATJ/Pals1/CRB1 complex can form a tripartite tight junction in epithelial cells crucial to their integrity.

### REFERENCES

1. Roh, M.H., Makarova, O., Liu, C.J., Shin, K., Lee, S., Laurinec, S., Goyal, M., Wiggins, R., Margolis, B. 2002. The Maguk protein, Pals1, functions as an adapter, linking mammalian homologs of Crumbs and Discs Lost. *J. Cell Biol.* 157: 161-172.
2. Poliak, S., Matlis, S., Ullmer, C., Scherer, S.S., Peles, E. 2002. Distinct claudins and associated PDZ proteins form different autotypic tight junctions in myelinating Schwann cells. *J. Cell Biol.* 159: 361-372.
3. Roh, M.H., Liu, C.J., Laurinec, S., Margolis, B. 2002. The carboxyl terminus of zona occludens-3 binds and recruits a mammalian homologue of discs lost to tight junctions. *J. Biol. Chem.* 277: 27501-27509.
4. Hurd, T.W., Gao, L., Roh, M.H., Macara, I.G., Margolis, B. 2003. Direct interaction of two polarity complexes implicated in epithelial tight junction assembly. *Nat. Cell Biol.* 5: 137-142.
5. Makarova, O., Roh, M.H., Liu, C.J., Laurinec, S., Margolis, B. 2003. Mammalian Crumbs3 is a small transmembrane protein linked to protein associated with Lin-7 (Pals1). *Gene* 302: 21-29.

### CHROMOSOMAL LOCATION

Genetic locus: INADL (human) mapping to 1p31.3.

### SOURCE

PATJ (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PATJ 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-23242 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### APPLICATIONS

PATJ (G-19) is recommended for detection of PATJ 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).

PATJ (G-19) is also recommended for detection of PATJ in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PATJ siRNA (h): sc-43995, PATJ shRNA Plasmid (h): sc-43995-SH and PATJ shRNA (h) Lentiviral Particles: sc-43995-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](http://www.scbt.com) or our catalog for detailed protocols and support products.