

OIP106 (C-19): sc-48616

BACKGROUND

OIP106 (trafficking protein, kinesin-binding 1, TRAK1, OGT-interacting protein) contains 953 amino acids and is predominantly expressed in spinal cord tissue while exhibiting moderate expression in other tissues. OIP106, homolog of *Drosophila* Milton, interacts with the tetratricopeptide repeats of OGT and is O-glycosylated by OGT. Unlike other O-glycosylation substrates, however, OIP106 forms stable *in vitro* and *in vivo* associations with OGT and interacts with RNA polymerase II while associating with OGT *in vivo*. Research suggests that OIP106 plays a crucial role in modulating the endocytic trafficking of GABA_A receptors. OIP106 may expedite the targeting of endocytosed GABA_A receptors back to the cell surface or block them from degradation. Studies indicate that the protein may also be involved in directing newly synthesized GABA_A receptors to the cell surface.

REFERENCES

1. Kikuno, R., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIV. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 197-205.
2. Beck, M., et al. 2002. Identification, molecular cloning, and characterization of a novel GABA_A receptor-associated protein, GRIF-1. J. Biol. Chem. 277: 30079-30090.
3. Stowers, R.S., et al. 2002. Axonal transport of mitochondria to synapses depends on Milton, a novel *Drosophila* protein. Neuron 36: 1063-1077.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608112. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Brickley, K., et al. 2005. GRIF-1 and OIP106, members of a novel gene family of coiled-coil domain proteins: association *in vivo* and *in vitro* with kinesin. J. Biol. Chem. 280: 14723-14732.
6. Gilbert, S.L., et al. 2006. TRAK1 mutation disrupts GABA_A receptor homeostasis in hypertonic mice. Nat. Genet. 38: 245-250.

CHROMOSOMAL LOCATION

Genetic locus: TRAK1 (human) mapping to 3p22.1; Trak1 (mouse) mapping to 9 F4.

SOURCE

OIP106 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of OIP106 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-48616 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

OIP106 (C-19) is recommended for detection of OIP106 isoform 1 only of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

OIP106 (C-19) is also recommended for detection of OIP106 isoform 1 only in additional species, including equine, canine and avian.

Suitable for use as control antibody for OIP106 siRNA (h): sc-61258, OIP106 siRNA (m): sc-61259, OIP106 shRNA Plasmid (h): sc-61258-SH, OIP106 shRNA Plasmid (m): sc-61259-SH, OIP106 shRNA (h) Lentiviral Particles: sc-61258-V and OIP106 shRNA (m) Lentiviral Particles: sc-61259-V.

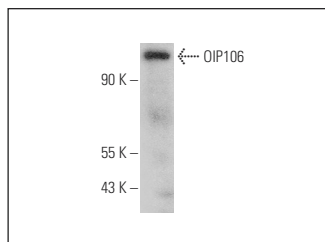
Molecular Weight of OIP106: 106 kDa.

Positive Controls: human heart extract: sc-363763.

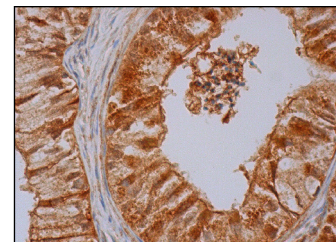
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



OIP106 (C-19): sc-48616. Western blot analysis of OIP106 expression in human heart tissue extract.



OIP106 (C-19): sc-48616. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic, membrane and nuclear staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.