

OST48 (H-1): sc-74407

BACKGROUND

Membrane proteins of the endoplasmic reticulum (ER) may be localized by mechanisms that involve retention, retrieval or a combination of both. ER localization information has been found in cytoplasmic, transmembrane or luminal domains. Specific retrieval mechanisms have been identified for luminal ER proteins, which contain a KDEL domain, and for type I transmembrane proteins carrying a dilysine motif. The mammalian oligosaccharyltransferase (OST) is a protein complex that is composed of four rough ER-specific, type I transmembrane proteins: ribophorins I and II (RI and RII), OST48 and DAD1 (also designated defender against apoptotic death). The ribophorins are integral membrane glycoproteins that localize exclusively to the rough endoplasmic reticulum. There is affinity between the cytoplasmically located N-terminal region of the DAD1 and the short cytoplasmic tail of OST48 to place DAD1 firmly into the OST complex. The OST affects the cotranslational N-glycosylation of newly synthesized polypeptides.

REFERENCES

1. Silberstein, S., et al. 1992. The 48 kDa subunit of the mammalian oligosaccharyltransferase complex is homologous to the essential yeast protein WBP1. *J. Biol. Chem.* 267: 23658-23663.
2. Fu, J., et al. 1997. Interactions among subunits of the oligosaccharyltransferase complex. *J. Biol. Chem.* 272: 29687-29692.

CHROMOSOMAL LOCATION

Genetic locus: DDOST (human) mapping to 1p36.12; Ddost (mouse) mapping to 4 D3.

SOURCE

OST48 (H-1) is a mouse monoclonal antibody raised against amino acids 157-456 of OST48 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OST48 (H-1) is recommended for detection of OST48 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for OST48 siRNA (h): sc-40788, OST48 siRNA (m): sc-40789, OST48 shRNA Plasmid (h): sc-40788-SH, OST48 shRNA Plasmid (m): sc-40789-SH, OST48 shRNA (h) Lentiviral Particles: sc-40788-V and OST48 shRNA (m) Lentiviral Particles: sc-40789-V.

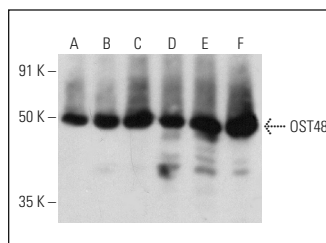
Molecular Weight of OST48: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Neuro-2A whole cell lysate: sc-364185 or C3H/10T1/2 cell lysate: sc-3801.

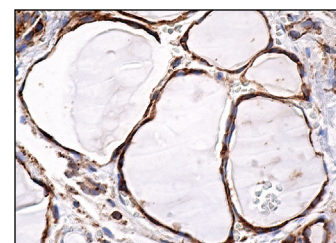
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



OST48 (H-1): sc-74407. Western blot analysis of OST48 expression in NCI-H1299 (A), Jurkat (B), Neuro-2A (C), C3H/10T1/2 (D), RIN-m5F (E) and RPE-J (F) whole cell lysates.



OST48 (H-1): sc-74407. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Fan, Y., et al. 2011. Comparative proteomics of spinal cords of rat fetuses with spina bifida aperta. *J. Proteomics* 75: 668-676.
2. Zhuang, A., et al. 2017. Increased liver AGEs induce hepatic injury mediated through an OST48 pathway. *Sci. Rep.* 7: 12292.
3. Zhuang, A., et al. 2021. The AGE receptor, OST48 drives podocyte foot process effacement and basement membrane expansion (alters structural composition). *Endocrinol. Diabetes Metab.* 4: e00278.

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 for detailed protocols and support products.