

OST48 (E-9): sc-74408

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.

CHROMOSOMAL LOCATION

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

SOURCE

OST48 (E-9) is a mouse monoclonal antibody raised against amino acids 157-456 of OST48 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OST48 (E-9) is available conjugated to agarose (sc-74408 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74408 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74408 PE), fluorescein (sc-74408 FITC), Alexa Fluor[®] 488 (sc-74408 AF488), Alexa Fluor[®] 546 (sc-74408 AF546), Alexa Fluor[®] 594 (sc-74408 AF594) or Alexa Fluor[®] 647 (sc-74408 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74408 AF680) or Alexa Fluor[®] 790 (sc-74408 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

OST48 (E-9) 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).

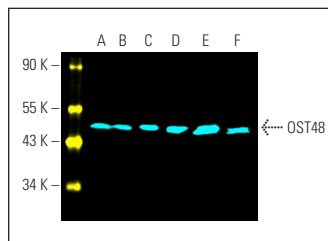
Suitable for use as control antibody for OST48 siRNA (h): sc-40788, OST48 siRNA (m): sc-40789, OST48 shRNA Plasmid (h): sc-40788-SH, OST48 shRNA Plasmid (m): sc-40789-SH, OST48 shRNA (h) Lentiviral Particles: sc-40788-V and OST48 shRNA (m) Lentiviral Particles: sc-40789-V.

Molecular Weight of OST48: 48 kDa.

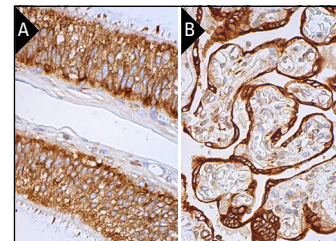
STORAGE

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

DATA



OST48 (E-9) Alexa Fluor[®] 647: sc-74408 AF647. Direct fluorescent western blot analysis of OST48 expression in HeLa (A), NCI-H1299 (B), NIH/3T3 (C), KNRK (D), Neuro-2A (E) and C3H/10T1/2 (F) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker[™] MW Tag-Alexa Fluor[®] 488: sc-516790.



OST48 (E-9): sc-74408. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells (B).

SELECT PRODUCT CITATIONS

- Bartling, B., et al. 2011. Prognostic potential and tumor growth-inhibiting effect of plasma advanced glycation end products in non-small cell lung carcinoma. *Mol. Med.* 17: 980-989.
- Zhang, X., et al. 2012. A role for presenilins in autophagy revisited: normal acidification of lysosomes in cells lacking PSEN1 and PSEN2. *J. Neurosci.* 32: 8633-8648.
- Ding, Y., et al. 2014. The endoplasmic reticulum-based acetyltransferases, ATase1 and ATase2, associate with the oligosaccharyltransferase to acetylate correctly folded polypeptides. *J. Biol. Chem.* 289: 32044-32055.
- Nguyen, D., et al. 2018. Proteomics reveals signal peptide features determining the client specificity in human TRAP-dependent ER protein import. *Nat. Commun.* 9: 3765.
- Perkins, R.K., et al. 2019. Experimental hyperglycemia alters circulating concentrations and renal clearance of oxidative and advanced glycation end products in healthy obese humans. *Nutrients* 11: 532.
- Wächter, K., et al. 2021. AGE-rich bread crust extract boosts oxidative stress interception via stimulation of the Nrf2 pathway. *Nutrients* 13: 3874.
- Itakura, M., et al. 2022. Histone functions as a cell-surface receptor for AGEs. *Nat. Commun.* 13: 2974.
- Chang, X., et al. 2022. DDOST correlated with malignancies and immune microenvironment in gliomas. *Front. Immunol.* 13: 917014.
- Tu, Y., et al. 2022. MITA oligomerization upon viral infection is dependent on its N-glycosylation mediated by DDOST. *PLoS Pathog.* 18: e1010989.

RESEARCH USE

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