

EDEM (D-1): sc-377394

BACKGROUND

Proteins expressed in the endoplasmic reticulum (ER) are subjected to a tight quality control. Terminally misfolded proteins in the endoplasmic reticulum (ER) are retrotranslocated to the cytoplasm and degraded by proteasomes through a mechanism known as ER-associated degradation (ERAD). EDEM (ER degradation-enhancing α -mannosidase-like) protein is a type II membrane protein that localizes to the ER and is directly involved in ERAD. EDEM targets misfolded glycoproteins for degradation in an N-glycan-dependent manner and extracts misfolded glycoproteins from the calnexin cycle. The human EDEM gene maps to chromosome 3p26.1.

CHROMOSOMAL LOCATION

Genetic locus: EDEM1 (human) mapping to 3p26.1; Edem1 (mouse) mapping to 6 E2.

SOURCE

EDEM (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 623-651 at the C-terminus of EDEM of human origin.

PRODUCT

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

EDEM (D-1) is available conjugated to agarose (sc-377394 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377394 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-377394 PE), fluorescein (sc-377394 FITC) or Alexa Fluor[®] 488 (sc-377394 AF488) or Alexa Fluor[®] 647 (sc-377394 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-377394 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

EDEM (D-1) is recommended for detection of EDEM of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 EDEM siRNA (h): sc-43745, EDEM siRNA (m): sc-143293, EDEM shRNA Plasmid (h): sc-43745-SH, EDEM shRNA Plasmid (m): sc-143293-SH, EDEM shRNA (h) Lentiviral Particles: sc-43745-V and EDEM shRNA (m) Lentiviral Particles: sc-143293-V.

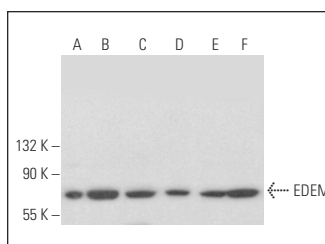
Molecular Weight of EDEM: 74 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or RAW 264.7 whole cell lysate: sc-2211.

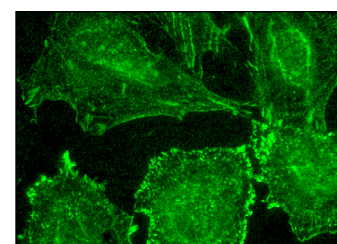
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



EDEM (D-1): sc-377394. Western blot analysis of EDEM expression in HeLa (A), Jurkat (B), RAW 264.7 (C), NIH/3T3 (D), HEK293 (E) and BJAB (F) whole cell lysates.



EDEM (D-1): sc-377394. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Wang, S., et al. 2018. ATF6 safeguards organelle homeostasis and cellular aging in human mesenchymal stem cells. *Cell Discov.* 4: 2.
- Gopisetty, M.K., et al. 2019. Endoplasmic reticulum stress: major player in size-dependent inhibition of P-glycoprotein by silver nanoparticles in multidrug-resistant breast cancer cells. *J. Nanobiotechnology* 17: 9.
- Xu, L., et al. 2021. lncRNA Xist regulates sevoflurane-induced social and emotional impairment by modulating miR-98-5p/EDEM1 signaling axis in neonatal mice. *Mol. Ther. Nucleic Acids* 24: 939-950.
- Stojkowska, I., et al. 2022. Rescue of α -synuclein aggregation in Parkinson's patient neurons by synergistic enhancement of ER proteostasis and protein trafficking. *Neuron* 110: 436-451.e11.
- Bhatia, R., et al. 2022. Malondialdehyde-acetaldehyde extracellular matrix protein adducts attenuate unfolded protein response during alcohol and smoking-induced pancreatitis. *Gastroenterology* 163: 1064-1078.e10.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.