

EDEM2 (JD-32): sc-130460

BACKGROUND

Proteins expressed in the endoplasmic reticulum (ER) are tightly regulated by a variety of quality control mechanisms. Terminally misfolded proteins in the ER are retrotranslocated to the cytoplasm and degraded by proteasomes through a mechanism known as ER-associated degradation (ERAD). EDEM2 (ER degradation-enhancing α -mannosidase-like 2) is a 578 amino acid secreted protein that, in conjunction with other EDEM proteins (namely EDEM1 and EDEM3), is involved in the ERAD pathway of protein degradation. EDEM2, a member of the glycosyl hydrolase 47 family, contains a mannosidase homology domain, an N-terminal cleavable signal sequence and a C-terminal extension that is required for both ER retention and the proper function of EDEM2. Human EDEM2 shares 93% sequence identity with its mouse homolog, suggesting a conserved role between species. Two isoforms of EDEM2 exist due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610302. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. *Genome Res.* 13: 2265-2270.
3. Mast, S.W., et al. 2005. Human EDEM2, a novel homolog of family 47 glycosidases, is involved in ER-associated degradation of glycoproteins. *Glycobiology* 15: 421-436.
4. Olivari, S., et al. 2005. A novel stress-induced EDEM variant regulating endoplasmic reticulum-associated glycoprotein degradation. *J. Biol. Chem.* 280: 2424-2428.
5. Oda, Y., et al. 2006. Derlin-2 and Derlin-3 are regulated by the mammalian unfolded protein response and are required for ER-associated degradation. *J. Cell Biol.* 172: 383-393.
6. Olivari, S. and Molinari, M. 2007. Glycoprotein folding and the role of EDEM1, EDEM2 and EDEM3 in degradation of folding-defective glycoproteins. *FEBS Lett.* 581: 3658-3664.

CHROMOSOMAL LOCATION

Genetic locus: EDEM2 (human) mapping to 20q11.22.

SOURCE

EDEM2 (JD-32) is a mouse monoclonal antibody raised against recombinant EDEM2 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

EDEM2 (JD-32) is recommended for detection of EDEM2 of human origin by 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).

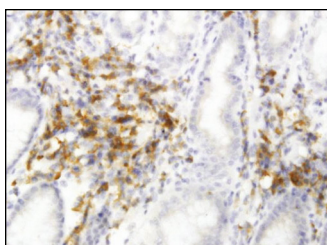
Suitable for use as control antibody for EDEM2 siRNA (h): sc-77226, EDEM2 shRNA Plasmid (h): sc-77226-SH and EDEM2 shRNA (h) Lentiviral Particles: sc-77226-V.

Molecular Weight of EDEM2: 70 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



EDEM2 (JD-32): sc-130460. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing extracellular localization.

SELECT PRODUCT CITATIONS

1. Ghionescu, A.V., et al. 2025. The endoplasmic reticulum degradation-enhancing α -mannosidase-like protein 3 attenuates the unfolded protein response and has pro-survival and pro-viral roles in hepatoma cells and hepatocellular carcinoma patients. *J. Biomed. Sci.* 32: 11.

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.