



EDEM2 (P-17): sc-87707

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 (P-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of EDEM2 of human origin.

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 or our catalog for detailed protocols and support products.

PRODUCT

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

Blocking peptide available for competition studies, sc-87707 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EDEM2 (P-17) is recommended for detection of EDEM2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with family member EDEM.

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 SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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