

# EDEM2 (N-14): sc-87706

## 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  $\alpha$ -mannosidase-like 2) is a 578 amino acid secreted protein that, in conjunction with other EDEM proteins (namely EDEM 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

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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.
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## CHROMOSOMAL LOCATION

Genetic locus: EDEM2 (human) mapping to 20q11.22; Edem2 (mouse) mapping to 2 H1.

## SOURCE

EDEM2 (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of EDEM2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, ready P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

EDEM2 (N-14) is recommended for detection of EDEM2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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); non cross-reactive with family member EDEM.

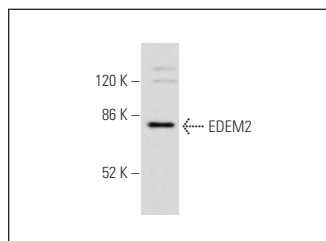
EDEM2 (N-14) is also recommended for detection of EDEM2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for EDEM2 siRNA (h): sc-77226, EDEM2 siRNA (m): sc-143294, EDEM2 shRNA Plasmid (h): sc-77226-SH, EDEM2 shRNA Plasmid (m): sc-143294-SH, EDEM2 shRNA (h) Lentiviral Particles: sc-77226-V and EDEM2 shRNA (m) Lentiviral Particles: sc-143294-V.

Molecular Weight of EDEM2: 70 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

## DATA



EDEM2 (N-14): sc-87706. Western blot analysis of EDEM2 expression in K-562 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **EDEM2 (JD-32): sc-130460**, our highly recommended monoclonal alternative to EDEM2 (N-14).