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Product Information

Anti-EDEM2 (N-terminal)
produced in rabbit, affinity isolated antibody

Catalog Number **E9906**

Product Description

Anti-EDEM2 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 22-38 of human EDEM2 (GeneID: 55741), conjugated to KLH. The corresponding sequence differs by one amino acid in mouse and 2 amino acids in rat EDEM2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-EDEM2 (N-terminal) recognizes human and mouse EDEM2. The antibody may be used in immunoblotting (~70 kDa) and immunofluorescence. Detection of the EDEM2 band by immunoblotting is specifically inhibited with the immunizing peptide.

EDEM2 (ER degradation-enhancing alpha-mannosidase-like protein 2), a stress-regulated mannosidase-like protein, targets misfolded glycoproteins for degradation in an N-glycan dependent manner.[1, 2] Proteins that fail to fold in the ER are transferred from the ER to the cytosol, where they are destroyed by the ubiquitin-proteasome system.[3] Quality control in the ER is regulated by productive folding and ER-associated degradation (ERAD) mechanisms. Accelerated refolding and degradation of unfolded proteins are induced in response to ER stress by a transcriptional program termed the unfolded protein response (UPR).[4] Three EDEM homologues, EDEM1, EDEM2, and EDEM3 have been identified, which are transcriptionally upregulated upon ER stress by the activated IRE1/Xbp-1 branch.[5] Similar to EDEM1, EDEM2 is localized to the ER mainly as a soluble glycoprotein, interacts with calnexin, and lacks mannosidase activity.[1-2, 6] Over-expression of EDEM2 accelerates ERAD by promoting the release of terminally misfolded glycoproteins from the calnexin cycle, without affecting the rate of degradation of non-glycosylated polypeptides or the maturation of model secretory proteins.[2]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage freeze, at −20 °C in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1.0 µg/mL is recommended using whole extracts of HEK-293T cells expressing recombinant human EDEM2.

Indirect Immunofluorescence: a working concentration of 5-10 µg/mL is recommended using mouse 3T3 cells.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

References

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3. Kostova, Z., and Wolf, D.H., *EMBO J.*, **22**, 2309-2317 (2003).
4. Oda, Y., et al., *J. Cell Biol.*, **172**, 383-393 (2006).
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6. Oda, Y., et al., *Science*, **299**, 1394-1397 (2003).

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