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Product Information

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

Product Number **E1782**

Product Description
Anti-EDEM2 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at C-terminal of human EDEM2 (GeneID: 55741), conjugated to KLH. The corresponding sequence is identical in mouse and rat EDEM2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-EDEM2 (C-terminal) recognizes human and rat EDEM2. The antibody may be used in various immunochemical techniques including 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] EDEM2, similarly to EDEM1, is localized to the ER, mainly as a soluble glycoprotein, interacts with calnexin and lacks mannosidase activity.[1,2,6] Overexpression 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 a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer
For R&D use only. Not for drug, household, or other uses. Please consult the 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 in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile
Immunoblotting: a working concentration of 0.5-1.0 µg/mL is recommended using whole extracts of human HepG2 and rat NRK cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions 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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