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Product Information

Anti-EDEM1 (internal)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200271**

Product Description
Anti-EDEM1 (internal) is produced in rabbit using as immunogen a synthetic peptide corresponding to an internal region within human EDEM1 (GeneID: **9695**), conjugated to KLH. The corresponding sequence differs by a single amino acid in mouse and by 2 amino acids in rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-EDEM1 (internal) recognizes human and mouse EDEM1. The antibody may be used in various immunochemical techniques including immunoblotting (75/65 kDa) and immunoprecipitation. Detection of the EDEM1 bands by immunoblotting is specifically inhibited by the immunizing peptide. A non-specific band of ~26 kDa may be detected in some cell extract preparations.

EDEM1 (ER degradation-enhancing α-mannosidase-like protein 1), a putative mannose-binding lectin, targets misfolded glycoproteins for degradation in an N-glycan dependent manner.[1] 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.[2] 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).[3] Three EDEM homologues, EDEM1, EDEM2 and EDEM3 have been identified, which are transcriptionally upregulated upon ER stress by the activated IRE1/Xbp-1 branch.[4] In mammalian cells, EDEM1 is localized to the ER, mainly as a soluble glycoprotein, interacts with the COOH-terminus of calnexin and lacks mannosidase activity.[6] Over-expression of EDEM1 accelerates ERAD by promoting the release of terminally misfolded glycoproteins from calnexin, whereas down-regulation of EDEM delays ERAD.[5,7]

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
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 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 concentration of 2-4 µg/mL is recommended using whole extracts of human Jurkat cells.

Immunoprecipitation: a working amount of 2.5-5.0 µg is recommended using lysates of HEK-293T cells over expressing mouse EDEM1.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test. Exposure to sensitive film is recommended.

References
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3. Oda, Y., et al., *J. Cell Biol.*, **172**, 383-393 (2006).
4. Ni, M. and Lee, A.S., *FEBS Lett.*, **581,** 3641-3651 (2007).
5. Oda, Y., et al., *Science*, **299**, 1394-1397 (2003).
6. Mast, S.W., et al., *Glycobiology*, **15**, 421-436 (2005).
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