

## EDEM2 Protein, Human, Recombinant (His)

### General Information

Synonyms:	UNQ573/PRO1135;ER degradation enhancer, mannosidase alpha-like 2;ER degradation enhancer, mannosidase $\alpha$ -like 2;C20orf49;C20orf31;bA4204.1
Protein Construction:	A DNA sequence encoding the human EDEM2 (AAH01371.1) (Met1-Lys492) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH01371.1
Molecular Weight:	54 kDa (predicted); 53-58 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at  $-80^{\circ}\text{C}$ . For reconstituted protein solutions, the solution can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

EDEM2, also known as C2orf31, belongs to a family of proteins involved in ER-associated degradation (ERAD) of glycoproteins. In the endoplasmic reticulum (ER), misfolded proteins are retrotranslocated to the cytosol and degraded by the proteasome. Early in this pathway, a proposed luminal ER lectin, EDEM, recognizes misfolded glycoproteins in the ER, disengages the nascent molecules from the folding pathway, and facilitates their

targeting for disposal. In humans there are a total of three EDEM homologs. The amino acid sequences of these proteins are different from other lectins but are closely related to the Class I mannosidases (family 47 glycosidases). EDEM2 is one of the EDEM homologs. Overexpression of EDEM2 accelerates the degradation of misfolded alpha1-antitrypsin, indicating that the protein is involved in ERAD.

### Reference

- Mast SW. et al., 2005, Glycobiology. 15 (4): 421-36.  
Olivari S. et al., 2005, J Biol Chem. 280 (4): 2424-8.  
Ota T. et al., 2004, Nat Genet. 36 (1): 40-5.

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