

## Recombinant Human MAN1B1, His-tagged

Cat. No. MAN1B1-135H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human Endoplasmic Reticulum Mannosyl-Oligosaccharide 1,2- $\alpha$ -Mannosidase/MAN1B1 is produced by our mammalian expression system in human cells. The target protein is expressed with sequence (Asp106-Ala699) of Human MAN1B1 fused with a polyhistidine tag at the C-terminus.

**Species** Human

**Source** HEK293

**ProteinLength** 106-699 a.a.

**Description** Endoplasmic Reticulum Mannosyl-Oligosaccharide 1,2- $\alpha$ -Mannosidase (MAN1B1) belongs to the glycosyl hydrolase 47 family. MAB1B1 is a single-pass type II membrane protein and widely expressed in many tissues. MAB1B1 is involved in glycoprotein quality control targeting of misfolded glycoproteins for degradation. MAB1B1 can be inhibited by both 1-deoxymannojirimycin (dMNJ) and kifunensine. Defects in MAN1B1 are the cause of mental retardation autosomal recessive type 15 (MRT15). Mental retardation is characterized by significantly below average general intellectual functioning, it is also associated with impairments in adaptative behavior and manifested during the developmental period.

**AA Sequence** DHWKALAFRLEEEQKMRPEIAGLKPANPPVLPAPQKADTDPENLPEISSQKTQRHIQ  
RGPPHLQI RPPSQDLKDGTEQEEATKRQEAPVDP RPEGDPQRTVISWRGAVIEPEQ  
GTELPSRRAEVPTKPPLP PARTQGTPVHLNRYRQKGVIDVFLHAWKGYRKFAWGHD

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ELKPVSRSFSEWFGLGLTLIDALDTMWI LGLRKEFEEARKWVSKKLHFEKDVDVNLF  
 ESTIRILGGLLSAYHLSGDSLFLRKAEDFGNRLMPA FRTPSKIPYSDVNIPTGVAHPP  
 RWTS DSTVAEVT SIQLEFRELSRLTGDKKFQEAVEKVTQHIHG LSGKKDGLVPMFIN  
 THSGLFTHLGVFTLGARADSYEYLLKQWIIQGGKQETQLLEDYVEAIEGVR THLLRH  
 SEPSKLT FVGELAHGRFSAKMDHLVCFLPGTLALGVYHGLPASHMELAQELMETCY  
 QMN RQMETGLSPEIVHFNLYPQPGRRDVEVKPADRHLLRPETVESLFYLYRVTG  
 DRKYQDWGWEILQ SFSRFTRVPSGGYSSINNVQDPQKPEPRDKMESFFLGETLKY  
 LFLLSDDPNLLSLDAYVFNTEA HPLPIWTPAVDHHHHHHH

**Endotoxin** Less than 0.1 ng/μg (1 IEU/μg).

**Purity** Greater than 95% as determined by SEC-HPLC and reducing SDS-PAGE.

## GENE INFORMATION

**Gene Name** [MAN1B1 mannosidase, alpha, class 1B, member 1 \[ Homo sapiens \]](#)

**Official Symbol** MAN1B1

**Synonyms**

MAN1B1; mannosidase, alpha, class 1B, member 1; endoplasmic reticulum mannosyl-oligosaccharide 1,2-alpha-mannosidase; alpha 1; 2 mannosidase; endoplasmic reticulum alpha mannosidase 1; endoplasmic reticulum mannosyl oligosaccharide 1; 2 alpha mannosidase 1; ER alpha 1; Man9GlcNAc2 specific processing alpha mannosidase; MANA ER; ER alpha 1,2-mannosidase; Man9GlcNAc2-specific processing alpha-mannosidase; endoplasmic reticulum mannosyl-oligosaccharide 1,2-alpha-mannosidase 1; MRT15; ERMAN1; MANA-ER; FLJ37559;

**Gene ID** [11253](#)

**mRNA Refseq** [NM\\_016219](#)

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<b>Protein Refseq</b>	NP_057303
<b>MIM</b>	604346
<b>UniProt ID</b>	Q9UKM7
<b>Chromosome Location</b>	9q34.3
<b>Pathway</b>	Asparagine N-linked glycosylation, organism-specific biosystem; Calnexin/calreticulin cycle, organism-specific biosystem; ER Quality Control Compartment (ERQC), organism-specific biosystem; Metabolic pathways, organism-specific biosystem; Metabolism of proteins, organism-specific biosystem; N-Glycan biosynthesis, organism-specific biosystem; N-Glycan biosynthesis, conserved biosystem;
<b>Function</b>	calcium ion binding; hydrolase activity, acting on glycosyl bonds; mannosyl-oligosaccharide 1,2-alpha-mannosidase activity; mannosyl-oligosaccharide 1,2-alpha-mannosidase activity;

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