

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- α -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- α -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	DHWKALAFRLIEEQKMRPEIAGLKPANPPVLPAPQKADTDPENLPEISSQKTQRHIQ RGPPHLQI RPPSQDLKDGTTQEEATKRQEAPVDPRPEGDPQRTVISWRGAVIEPEQ GTELPSSRAEVPTKPPLP PARTQGTVPVHLNRYRQKGVIDVFLHAWKGYRKFAWGHD

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ELKPVSRSEWFGGLTLIDALDTMWI LGLRKEFEEARKWVSKKLHFEKDVDVNL
 ESTIRILGGLLSAYHLSGDSLFLRKAEDFGNRLMPA FRTPSKIPYSDVNIGTGVAHPP
 RWTSDSTVAEVTSIQLEFRELSRLTGDKKFQEAVEKVTQHIHG LSGKKDGLVPMFIN
 THSGLFTHLGVFTLGARADSYEYLLKQWIQGGKQETQLLEDYVEAIEGVR THLLRH
 SEPSKLT FVGELAHGRFSAKMDHLVCFLPGTLALGVYHGLPASHMELAQELMETCY
 QMN RQMETGLSPEIVHFNLYPQPGRRDVEVKPADRHLLRPETVESLFYLYRVTG
 DRKYQDWGWEILQ SFSRFTRVPSGGYSSINNVQDPQKPEPRDKMESFFLGETLKY
 LFLFSDDPNLLSLDAYVFNTA HPLPIWTPAVDHHHHHH

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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Protein Refseq	NP_057303
MIM	604346
UniProt ID	Q9UKM7
Chromosome Location	9q34.3
Pathway	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;
Function	calcium ion binding; hydrolase activity, acting on glycosyl bonds; mannosyl-oligosaccharide 1,2-alpha-mannosidase activity; mannosyl-oligosaccharide 1,2-alpha-mannosidase activity;