

## TMC1 Protein, Mouse (Cell-Free, His)

<b>Cat. No.:</b>	HY-P702470
<b>Synonyms:</b>	Transmembrane channel-like protein 1; Beethoven protein; Deafness protein; Transmembrane cochlear-expressed protein 1
<b>Species:</b>	Mouse
<b>Source:</b>	E. coli Cell-free
<b>Accession:</b>	Q8R4P5 (M1-Q757)
<b>Gene ID:</b>	13409
<b>Molecular Weight:</b>	90.1 kDa

### PROPERTIES

#### AA Sequence

MLQIQVEEKE	EDTEESSSEE	EEDKLPRRES	LRPKRKRTRD
VINEDDPEPE	PEDEETRKAR	EKERRRRLRR	GAEEEEIDE
EELERLKALL	DENRQMIATV	KCKPWKMEKK	IEVLKEAKKF
VSENEGALGK	GKGKKWF AFK	MMMAKKWAKF	LRDFENFKAA
CVPWENK IKA	IESQFGSSVA	SYFLFLRWMY	GVNMVLFVLT
FSLIMLPEYL	WGLPYGSLPR	KTVPRAE EAS	AANFGVLYDF
NGLAQYSVLF	YGY YDNKRTI	GWLNFRLPLS	YFLVGIMCIG
YSFLVVLKAM	TKNIGDDGGG	DDNTFNFSWK	VFCSWDYLIG
NPETADNKFN	SITMNFKEAI	IEERAAQVEE	NIHLIRFLRF
LANFFVFLT L	GASGYLIFWA	VKRSQEF AQQ	DPDTLGWWEK
NEMNMVMSLL	GMFCPTLFDL	FAELEDYHPL	IALKWLLGRI
FALLLGNLYV	FILALMDEIN	NKIEEEKLVK	ANITLWEANM
IKAYNESLSG	LSGNTTGAPF	FVHPADVPRG	PCWETMVGQE
FVRLTVSDVL	TTYVTILIGD	FLRACFVRFC	NYCWCWDLEY
GYP SYTEFDI	SGNVLALIFN	QGM IWMGSFF	APSLPGINIL
RLHTSMYFQC	WAVMCCNVPE	ARVFKASRSN	NFYLGMLLLI
LFLSTMPVLY	MIVSLPPSFD	CGPFSGKNRM	FEVIGETLEH
DFPSWMAKIL	RQLSNPGLVI	AVILVMVLT I	YYLNATAKGQ
KAAANLDLKKK	MKQQALENKM	RNKKMAAARA	AAAAGGQ

#### Appearance

Lyophilized powder.

#### Formulation

Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.

#### Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is

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recommended to freeze aliquots at -20°C or -80°C for extended storage.

**Shipping**

Room temperature in continental US; may vary elsewhere.

**DESCRIPTION**

**Background**

The TMC1 protein stands out as a probable ion channel essential for the normal function of cochlear hair cells. Its interaction with TOMT is crucial, and the collaborative effort of TMC1 and TMC2 with TOMT facilitates their transportation into the stereocilia of hair cells. Furthermore, TMC1 engages with both isoforms CD1 and CD3 of PCDH15 via its N-terminus, emphasizing its involvement in intricate cellular interactions within the cochlea. Additionally, TMC1 interacts with CIB2 and CIB3, underlining its role in diverse protein-protein associations that contribute to the overall function of cochlear hair cells. The multifaceted interactions of TMC1 highlight its significance in maintaining the proper functionality of these specialized cells in the auditory system.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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