

Recombinant Human TMEM173 Protein (Leu139-Ser379), His tagged

Cat. No. TMEM173-3704H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human TMEM173 (Leu139-Ser379) protein fused with His tag was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	Leu139-Ser379
Description	Facilitator of innate immune signaling that acts as a sensor of cytosolic DNA from bacteria and viruses and promotes the production of type I interferon (IFN-alpha and IFN-beta). Innate immune response is triggered in response to non-CpG double-stranded DNA from viruses and bacteria delivered to the cytoplasm. Acts by binding cyclic dinucleotides: recognizes and binds cyclic di-GMP (c-di-GMP), a second messenger produced by bacteria, and cyclic GMP-AMP (cGAMP), a messenger produced by CGAS in response to DNA virus in the cytosol. Upon binding of c-di-GMP or cGAMP, STING1 oligomerizes, translocates from the endoplasmic reticulum and is phosphorylated by TBK1 on the pLxIS motif, leading to recruitment and subsequent activation of the transcription factor IRF3 to induce expression of type I interferon and exert a potent anti-viral state. In addition to promote the production of type I interferons, plays a direct role in autophagy. Following cGAMP-binding, STING1 buds from the endoplasmic reticulum into COPII vesicles, which then form the endoplasmic reticulum-Golgi intermediate compartment (ERGIC). The ERGIC

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serves as the membrane source for WIPI2 recruitment and LC3 lipidation, leading to formation of autophagosomes that target cytosolic DNA or DNA viruses for degradation by the lysosome.

Molecular Mass 27.92 kDa

Purity >90 % as determined by SDS-PAGE.

Notes For research use only.

Storage Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 centigrade for one week. Store at -20 to -80 centigrade for twelve months from the date of receipt.

Storage Buffer Supplied as solution form in PBS pH 7.5 or lyophilized from PBS pH 7.5.

Reconstitution Reconstitute in sterile water for a stock solution.

Shipping In general, proteins are provided as lyophilized powder/frozen liquid. They are shipped out with dry ice/blue ice unless customers require otherwise.

GENE INFORMATION

Gene Name TMEM173 transmembrane protein 173 [Homo sapiens (human)]

Official Symbol TMEM173

Synonyms TMEM173; transmembrane protein 173; FLJ38577; NET23; hMITA; hSTING; mediator of IRF3 activation; endoplasmic reticulum IFN stimulator; stimulator of interferon genes protein; mitochondrial mediator of IRF3 activation; endoplasmic reticulum interferon stimulator; N-terminal methionine-proline-tyrosine-serine plasma

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membrane tetraspanner; ERIS; MITA; MPYS; STING;

Gene ID [340061](#)

mRNA Refseq [NM_198282](#)

Protein Refseq [NP_938023](#)

MIM [612374](#)

UniProt ID [Q86WV6](#)

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