

Product Name: TMEM173 (3U7) Rabbit Monoclonal Antibody
Catalog #: AMRe19051



Summary

Production Name	TMEM173 (3U7) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB,IHC-P,ICC/IF,FC,IP,IF-P
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term.
Purification	Avoid freeze / thaw cycle. Affinity purification

Immunogen

Gene Name	STING
Alternative Names	ERIS; hMITA; hSTING; MITA; MPYS; NET23; STING; Tmem173; STING1 ; Stimulator of interferon genes protein;
Gene ID	340061.0
SwissProt ID	Q86WV6.

Application

Dilution Ratio	WB 1:1000, IHC-P/IF-P 1:500-1:2000, ICC/IF 1:100, FCM 1:200-1:500, IP 1:20-1:50
Molecular Weight	42kDa

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Background

Facilitator of innate immune signaling that promotes the production of type I interferon (IFN- α and IFN- β). Innate immune response is triggered in response to non-CpG double-stranded DNA from viruses and bacteria delivered to the cytoplasm. 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- α and IFN- β) (PubMed: [18724357](http://www.uniprot.org/citations/18724357), PubMed: [18818105](http://www.uniprot.org/citations/18818105), PubMed: [19433799](http://www.uniprot.org/citations/19433799), PubMed: [19776740](http://www.uniprot.org/citations/19776740), PubMed: [23027953](http://www.uniprot.org/citations/23027953), PubMed: [23910378](http://www.uniprot.org/citations/23910378), PubMed: [23747010](http://www.uniprot.org/citations/23747010), PubMed: [30842659](http://www.uniprot.org/citations/30842659)). Innate immune response is triggered in response to non-CpG double-stranded DNA from viruses and bacteria delivered to the cytoplasm (PubMed: [26300263](http://www.uniprot.org/citations/26300263)). 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 (PubMed: [21947006](http://www.uniprot.org/citations/21947006), PubMed: [23258412](http://www.uniprot.org/citations/23258412), PubMed: [23707065](http://www.uniprot.org/citations/23707065), PubMed: [23722158](http://www.uniprot.org/citations/23722158), PubMed: [26229117](http://www.uniprot.org/citations/26229117), PubMed: [23910378](http://www.uniprot.org/citations/23910378), PubMed: [23747010](http://www.uniprot.org/citations/23747010), PubMed: [30842659](http://www.uniprot.org/citations/30842659)). 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 (PubMed: [22394562](http://www.uniprot.org/citations/22394562), PubMed: [25636800](http://www.uniprot.org/citations/25636800), PubMed: [30842653](http://www.uniprot.org/citations/30842653)). In addition to promote the production of type I interferons, plays a direct role in autophagy (PubMed: [30568238](http://www.uniprot.org/citations/30568238), PubMed: [30842662](http://www.uniprot.org/citations/30842662)). Following cGAMP-binding, STING1 buds from the endoplasmic reticulum into COPII vesicles, which then form the endoplasmic reticulum-Golgi intermediate

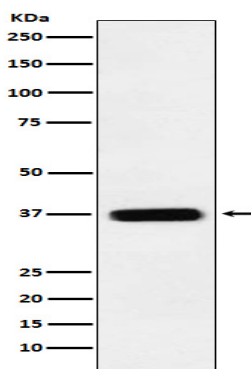
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compartment (ERGIC) (PubMed:30842662). The ERGIC serves as the membrane source for WIPI2 recruitment and LC3 lipidation, leading to formation of autophagosomes that target cytosolic DNA or DNA viruses for degradation by the lysosome (PubMed:30842662). The autophagy- and interferon-inducing activities can be uncoupled and autophagy induction is independent of TBK1 phosphorylation (PubMed:30568238, PubMed:30842662). Autophagy is also triggered upon infection by bacteria: following c-di- GMP-binding, which is produced by live Gram-positive bacteria, promotes reticulophagy (By similarity). Exhibits 2',3' phosphodiester linkage- specific ligand recognition: can bind both 2'-3' linked cGAMP (2'-3'- cGAMP) and 3'-3' linked cGAMP but is preferentially activated by 2'-3' linked cGAMP (PubMed:26300263, PubMed:23910378, PubMed:23747010). The preference for 2'-3'-cGAMP, compared to other linkage isomers is probably due to the ligand itself, whichs adopts an organized free- ligand conformation that resembles the STING1-bound conformation and pays low energy costs in changing into the active conformation (PubMed:26150511). May be involved in translocon function, the translocon possibly being able to influence the induction of type I interferons (PubMed:18724357). May be involved in transduction of apoptotic signals via its association with the major histocompatibility complex class II (MHC-II) (By similarity).

Research Area

Image Data



Western blot analysis of TMEM173 expression in HeLa cell lysate.

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Note

For research use only.