Human STING/TMEM173 Antibody

Monoclonal Mouse IgG_{2B} Clone # 723505

Catalog Number: MAB7169

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human STING/TMEM173 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 723505
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human STING/TMEM173 Ala215-Ser379 Accession # Q86WV6
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

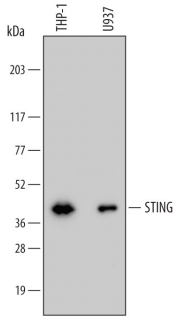
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Intracellular Staining by Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

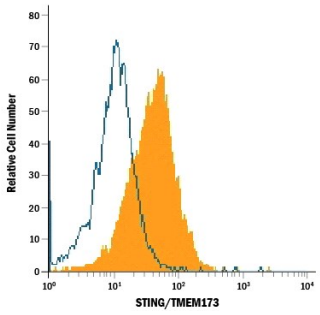
DATA

Western Blot



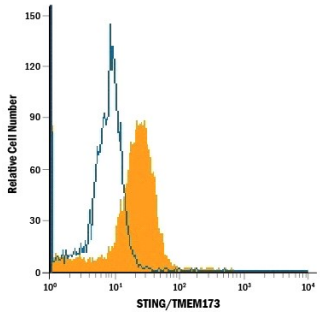
Detection of Human STING/TMEM173 by Western Blot. Western blot shows lysates of THP-1 human acute monocytic leukemia cell line and U937 human histiocytic lymphoma cell line. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human STING/TMEM173 Monoclonal Antibody (Catalog # MAB7169) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for STING/TMEM173 at approximately 40 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Intracellular Staining by Flow Cytometry



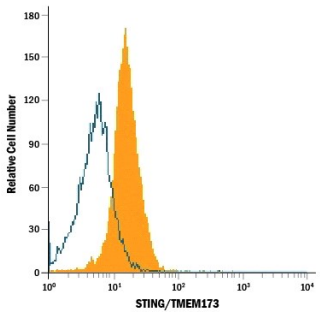
Detection of STING/TMEM173 in Human PBMC Monocytes by Flow Cytometry. Human peripheral blood mononuclear cell (PBMC) monocytes were stained with Mouse Anti-Human STING/TMEM173 Monoclonal Antibody (Catalog # MAB7169, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

Intracellular Staining by Flow Cytometry



Detection of STING/TMEM173 in THP-1 Human Cell Line by Flow Cytometry. THP-1 human acute monocytic leukemia cell line was stained with Mouse Anti-Human STING/TMEM173 Monoclonal Antibody (Catalog # MAB7169, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

Intracellular Staining by Flow Cytometry



Detection of STING/TMEM173 in U937 Human Cell Line by Flow Cytometry. U937 human histiocytic lymphoma cell line was stained with Mouse Anti-Human STING/TMEM173 Monoclonal Antibody (Catalog # MAB7169, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). To facilitate intracellular staining, cells were fixed with paraformaldehyde and permeabilized with saponin.

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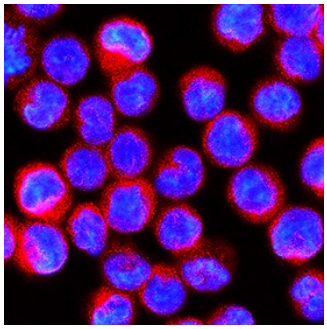
Immunocytochemistry



STING/TMEM173 in U937 Human Cell Line. STING/TMEM173 was detected in immersion fixed U937 human histiocytic lymphoma cell line using Mouse Anti-Human STING/TMEM173 Monoclonal Antibody (Catalog # MAB7169) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

STING (Stimulator of Interferon Genes), also called ERIS, MPYS, or MITA and designated TMEM173, is a 40-42 kDa 4-transmembrane protein that mediates both antiviral and MHC-II antigen recognition responses. STING is found predominantly in the endoplasmic reticulum. It acts as an adaptor protein for intracellular viral detection molecules, participating in the induction of type I interferon. It also may play a role in the initiation of apoptosis following MHC-II engagement. Cells known to express STING include B cells, dendritic cells, macrophages, and monocytes. Human STING is 379 amino acids (aa) in length. It contains an N-terminal cytoplasmic region (aa 1-20), four transmembrane segments (aa 21-173), and a C-terminal cytoplasmic domain (aa 174-379). Ubiquitination occurs at Lys150, and phosphorylation occurs at Ser358. STING forms 80 kDa homodimers. There are two potential splice forms, one that shows a 25 aa substitution for aa 1-173, and another that possesses an alternative start site at Met215, coupled to a premature truncation following Arg334. Over aa 215-379, human and mouse STING share 76% aa sequence identity.

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