


## Product datasheet

### Anti-STING antibody [SP339] ab227705

KO **VALIDATED** Recombinant RabMAb<sup>®</sup>

18 Images

#### Overview

Product name	Anti-STING antibody [SP339]
Description	Rabbit monoclonal [SP339] to STING
Host species	Rabbit
Tested applications	<b>Suitable for:</b> Flow Cyt (Intra), IHC-P, WB
Species reactivity	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Cow, Pig 
Immunogen	Synthetic peptide within Human TMEM173 aa 150-350 (C terminal). The exact sequence is proprietary. Database link: <a href="#">Q86WV6</a>
Positive control	WB: THP-1 and Wild-type THP-1 cell lysate. IHC-P: Human tonsil, colon, colon carcinoma, thymus, lymph node, lung, HK lymphoma, lung adenocarcinoma, pancreatic adenocarcinoma, lung squamous cell carcinoma and skin squamous cell carcinoma tissues. Flow Cyt (Intra): THP-1 cells.
General notes	<b>This product is FOR RESEARCH USE ONLY. For commercial use, please contact <a href="mailto:partnerships@abcam.com">partnerships@abcam.com</a>.</b>

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.60 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Purity	Protein A/G purified
Purification notes	Purified from TCS by protein A/G.
Clonality	Monoclonal
Clone number	SP339
Isotype	IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab227705 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/20 - 1/400. Primary incubation for 30 minutes at 4°C.
IHC-P		1/100. Perform heat mediated antigen retrieval with EDTA buffer pH 8.0 before commencing with IHC staining protocol. Primary incubation for 10 minutes at room temperature.
WB		1/400. Predicted molecular weight: 42 kDa. Primary incubation for 1 hour at room temperature.

## Target

### Function

Facilitator of innate immune signaling that 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. Able to activate both NF-kappa-B and IRF3 transcription pathways to induce expression of type I interferon and exert a potent anti-viral state following expression. May be involved in translocon function, the translocon possibly being able to influence the induction of type I interferons. May be involved in transduction of apoptotic signals via its association with the major histocompatibility complex class II (MHC-II). Mediates death signaling via activation of the extracellular signal-regulated kinase (ERK) pathway.

### Tissue specificity

Ubiquitously expressed.

### Sequence similarities

Belongs to the TMEM173 family.

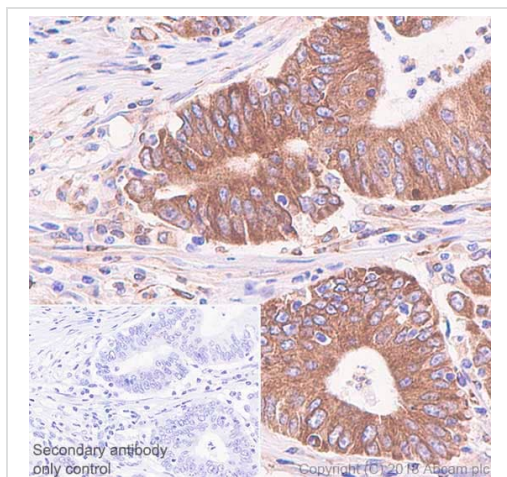
### Post-translational modifications

Phosphorylated on tyrosine residues upon MHC-II aggregation (By similarity). Phosphorylated on Ser-358 by TBK1, leading to activation and production of IFN-beta.  
Ubiquitinated. 'Lys-63'-linked ubiquitination mediated by TRIM56 at Lys-150 promotes homodimerization and recruitment of the antiviral kinase TBK1 and subsequent production of IFN-beta. 'Lys-48'-linked polyubiquitination at Lys-150 occurring after viral infection is mediated by RNF5 and leads to proteasomal degradation.

### Cellular localization

Endoplasmic reticulum membrane. Mitochondrion outer membrane. Cell membrane. Cytoplasm > perinuclear region. In response to double-stranded DNA stimulation, relocalizes to perinuclear region, where the kinase TBK1 is recruited.

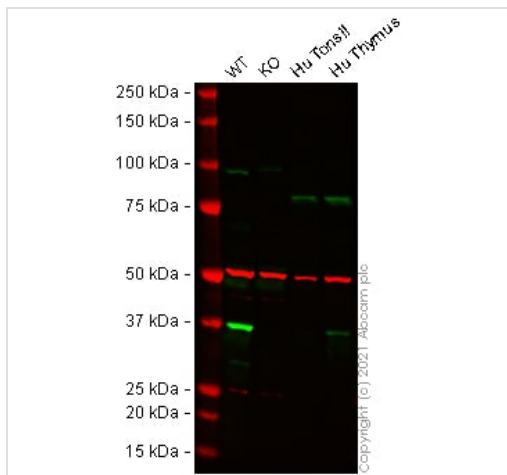
## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human colon carcinoma tissue sections labeling TMEM173 with ab227705 at 1/100 dilution (2.5 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB ([ab209101](#)) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on the human colon carcinoma, performed on a Leica Biosystems BOND™ RX instrument.

The section was incubated with ab227705 for 10 mins at room temperature.



Western blot - Anti-STING antibody [SP339] (ab227705)

**All lanes :** Anti-STING antibody [SP339] (ab227705) at 1/400 dilution

**Lane 1 :** Wild-type THP-1 cell lysate

**Lane 2 :** TMEM173 knockout THP-1 cell lysate

**Lane 3 :** Human Tonsil tissue lysate

**Lane 4 :** Human Thymus tissue lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

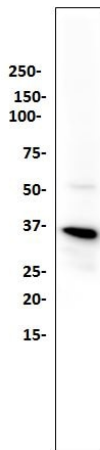
**Predicted band size:** 42 kDa

**Observed band size:** 37 kDa

**Lanes 1 - 4:** Merged signal (red and green). Green - ab227705 observed at 37 kDa. Red - loading control [ab7291](#) (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

ab227705 was shown to react with TMEM173 in wild-type THP-1 cells in Western blot with loss of signal observed in TMEM173 knockout cell line [ab270493](#) (TMEM173 knockout cell lysate [ab270516](#)). Wild-type THP-1 and TMEM173 knockout cell lysates

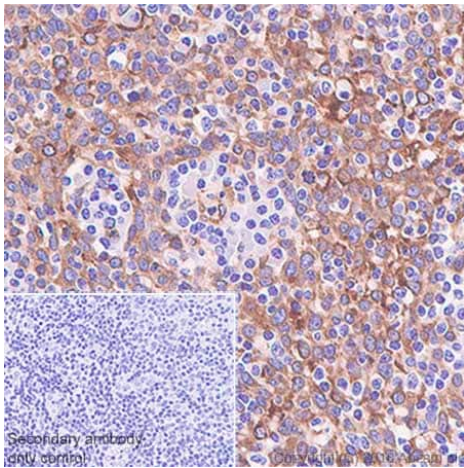
were subjected to SDS-PAGE. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with ab227705 and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 400 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-STING antibody [SP339]  
(ab227705)

Anti-STING antibody [SP339] (ab227705) at 1/400 dilution + THP-1  
(human monocytic leukemia cell line) cell lysate

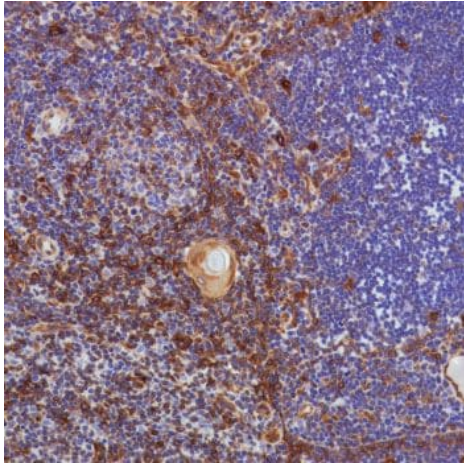
**Predicted band size:** 42 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-STING antibody [SP339]  
(ab227705)

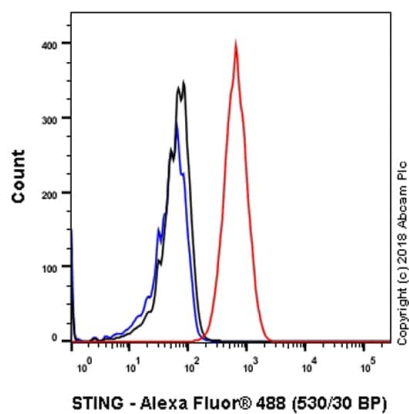
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue sections labeling TMEM173 with ab227705 at 1/100 dilution (2.5 µg/ml). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 10mins. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) was used as the secondary antibody. Hematoxylin was used as a counterstain. Positive staining on the human tonsil, performed on a Leica Biosystems BOND™ RX instrument.

The section was incubated with ab227705 for 10 mins at room temperature.



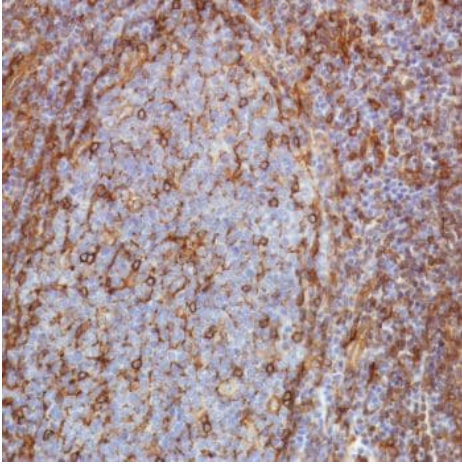
Formalin-fixed, paraffin-embedded human thymus tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



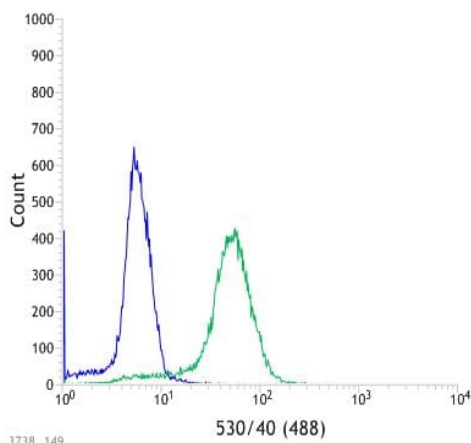
Flow cytometry analysis of THP-1 (human acute monocytic leukemia) labeling TMEM173 with purified ab227705 at 1/20 dilution (12.5 µg/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, **ab150081**) at 1/2000 dilution was used as a secondary antibody. Isotype control - Rabbit monoclonal IgG (**ab172730**) (Black). Unlabeled control - Unlabelled cells (blue).

Flow Cytometry (Intracellular) - Anti-STING antibody [SP339] (ab227705)



Formalin-fixed, paraffin-embedded human tonsil tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

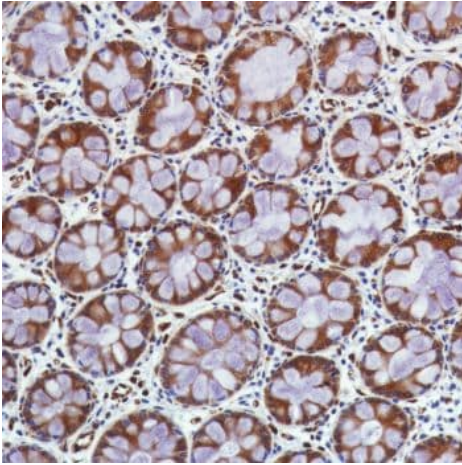
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



Flow cytometric analysis of THP-1 (human monocytic leukemia cell line) cell line labeling TMEM173 with ab227705 at 1/400 dilution (green) compared with a Rabbit IgG negative control (blue).

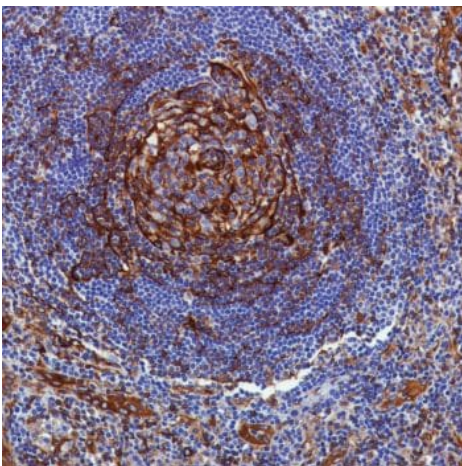
Flow Cytometry (Intracellular) - Anti-STING antibody [SP339] (ab227705)





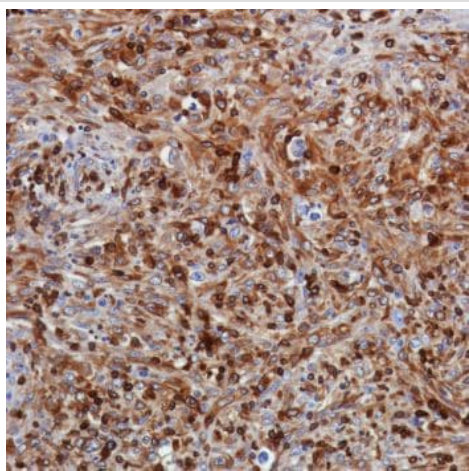
Formalin-fixed, paraffin-embedded human colon tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



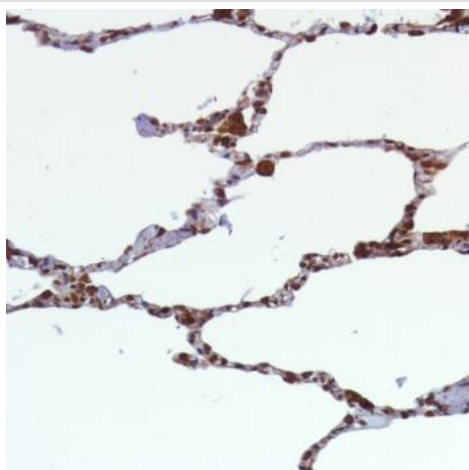
Formalin-fixed, paraffin-embedded human lymph node tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



Formalin-fixed, paraffin-embedded human HK lymphoma tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

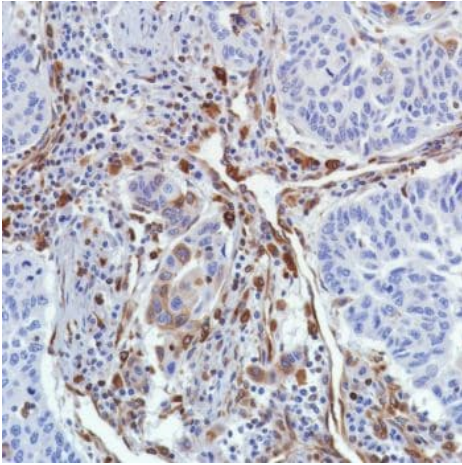
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



Formalin-fixed, paraffin-embedded human lung tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

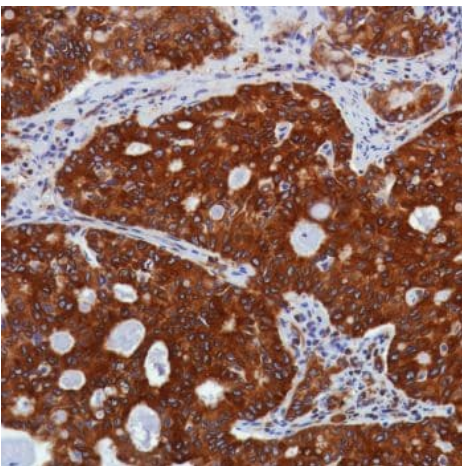
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)





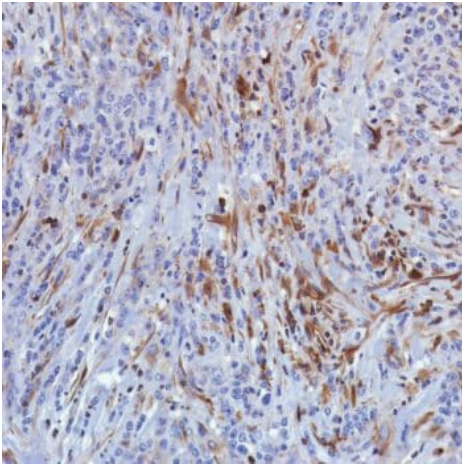
Formalin-fixed, paraffin-embedded human lung squamous cell carcinoma tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



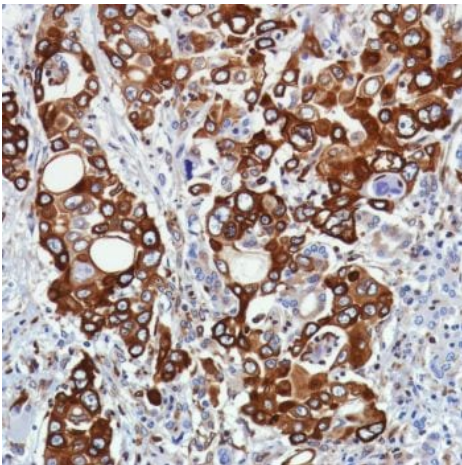
Formalin-fixed, paraffin-embedded human lung adenocarcinoma tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



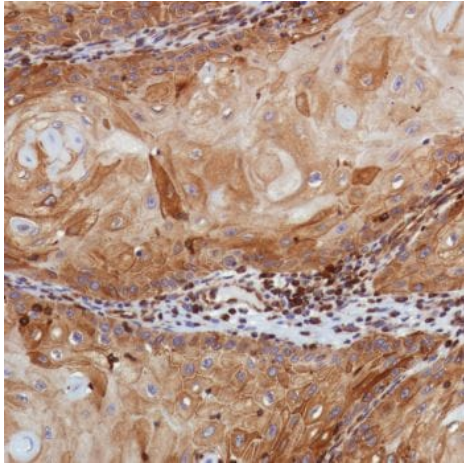
Formalin-fixed, paraffin-embedded human pancreatic adenocarcinoma tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



Formalin-fixed, paraffin-embedded human pancreatic adenocarcinoma tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)



Formalin-fixed, paraffin-embedded human skin squamous cell carcinoma tissue stained for TMEM173 using ab227705 at 1/100 dilution in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [SP339] (ab227705)

#### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-STING antibody [SP339] (ab227705)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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