abcam

Product datasheet

# Anti-STING antibody [EPR13130] ab181125

KO VALIDATED Recombinant RabMAb

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## Overview

| | |
|---|---|
| **Product name** | Anti-STING antibody [EPR13130] |
| **Description** | Rabbit monoclonal [EPR13130] to STING |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** Flow Cyt (Intra), WB, ICC/IF |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Recombinant fragment. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | THP1 or HACAT lysate, THP1 or HACAT cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

## 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** | Preservative: 0.01% Sodium azide<br>Constituents: 40% Glycerol, 0.05% BSA, 59% PBS |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR13130 |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab181125 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)** | | 1/10 - 1/20.<br>**ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| **WB** | ★★★★☆ **(1)** | 1/1000 - 1/2000. Detects a band of approximately 37 kDa. |
| **ICC/IF** | | 1/2000. **For unpurified, use 1/50 - 1/100.** |

## 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.

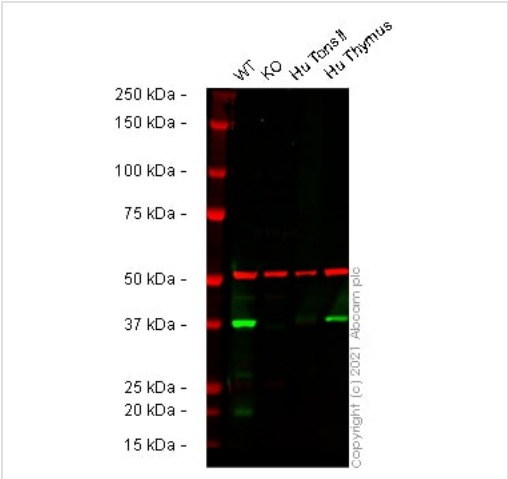
**Tissue specificity** Ubiquitously expressed.

**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




Western blot - Anti-STING antibody [EPR13130] (ab181125)

**All lanes :** Anti-STING antibody [EPR13130] (ab181125) at 1/1000 dilution

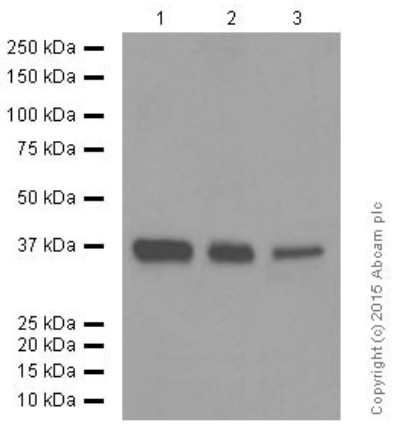
**Lane 1 :** Wild-type THP-1 cell lysate
**Lane 2 :** TMEM173 knockout THP-1 cell lysate
**Lane 3 :** Human Tonsil cell lysate
**Lane 4 :** Human Thymus cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

**Observed band size:** 37 kDa

False colour image of Western blot: Anti-STING antibody [EPR13130] staining at 1/1000 dilution, shown in green; loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) staining at 1/20000 dilution, shown in red. In Western blot, ab181125 was shown to bind specifically to STING. A band was observed at 37 kDa in wild-type THP-1 cell lysates with no signal observed at this size in TMEM173 knockout cell line **ab270493** (knockout cell lysate **ab270516**). To generate this image, wild-type and TMEM173 knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) at 1/20000 dilution.




Western blot - Anti-STING antibody [EPR13130] (ab181125)

**All lanes :** Anti-STING antibody [EPR13130] (ab181125) at 1/10000 dilution (purified)

**Lane 1 :** THP-1 cell lysate
**Lane 2 :** HACAT cell lysate
**Lane 3 :** human spleen lysate

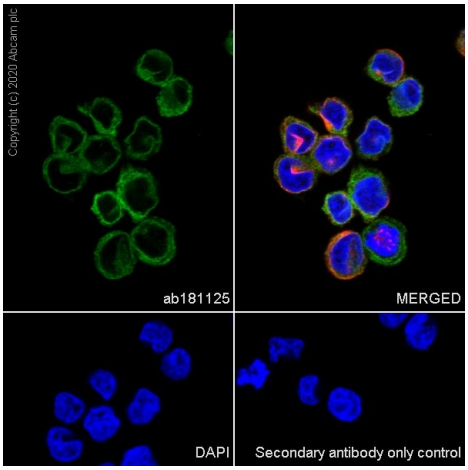
Lysates/proteins at 20 µg per lane.

**Secondary**
**All lanes :** HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Observed band size:** 37 kDa

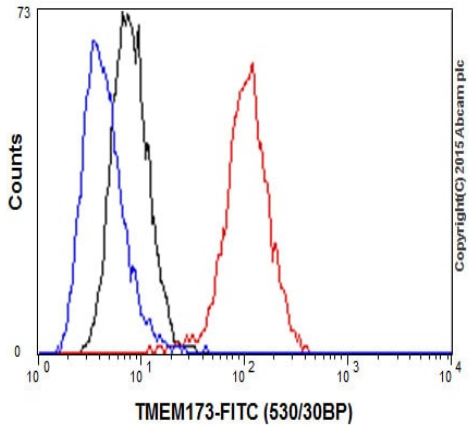
Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST




Immunocytochemistry/ Immunofluorescence - Anti-STING antibody [EPR13130] (ab181125)

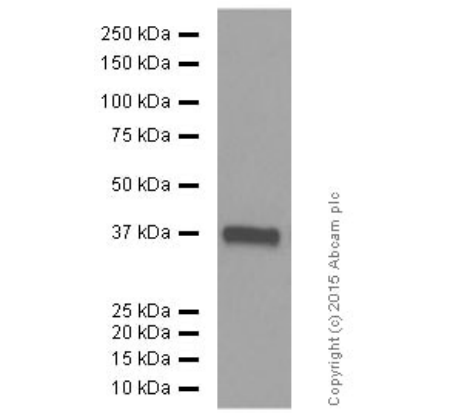
Immunocytochemistry/immunofluorescence analysis of THP-1 (human monocytic leukemia monocyte) cells labelling TMEM173 with ab181125 at 10 µg/mL. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/1000 was used as the secondary antibody (green). Cells were counterstained with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red). Nuclear DNA was labelled with DAPI (blue).
Confocal image showing cytoplasmic staining in THP-1 cells.




Flow Cytometry (Intracellular) - Anti-STING antibody [EPR13130] (ab181125)

Overlay histogram showing THP-1 cells fixed in 4% PFA and stained with purified ab181125 at a dilution of 1 in 20 (red line). The secondary antibody used was FITC goat anti-rabbit at a dilution of 1 in 500. Rabbit monoclonal IgG was used as an isotype control (black line) and cells incubated in the absence of both primary and secondary antibody were used as a negative control (blue line).

Alexa Fluor® 488 (**ab198950**) and R-PE (**ab208874**) conjugated versions are available for this clone.




Western blot - Anti-STING antibody [EPR13130] (ab181125)

Anti-STING antibody [EPR13130] (ab181125) at 1/2000 dilution (purified) + HEK293 cell lysate at 20 µg

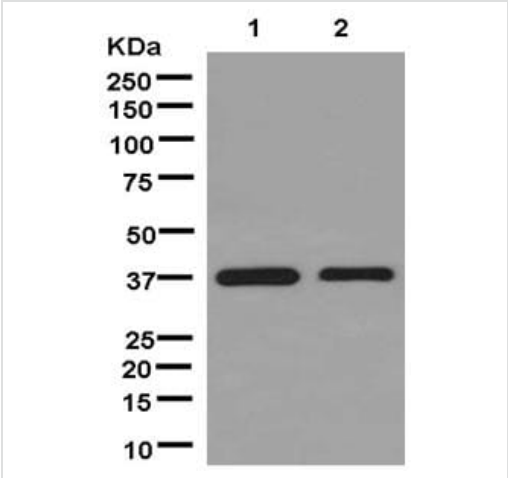
**Secondary**

HRP goat anti-rabbit IgG (H+L) at 1/1000 dilution

**Observed band size:** 37 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST



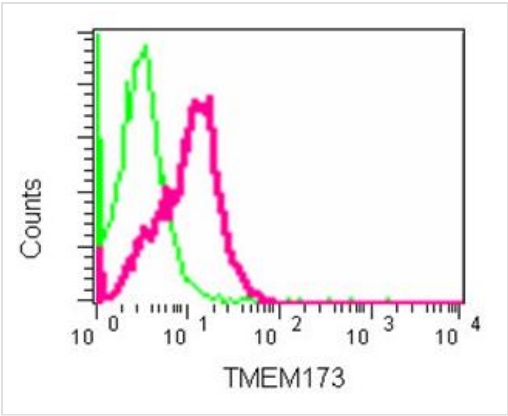

Western blot - Anti-STING antibody [EPR13130] (ab181125)

**All lanes :** Anti-STING antibody [EPR13130] (ab181125) at 1/2000 dilution (unpurified)

**Lane 1 :** THP1 lysate
**Lane 2 :** HACAT lysate

Lysates/proteins at 20 µg per lane.

**Secondary**
**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution




Flow Cytometry (Intracellular) - Anti-STING antibody [EPR13130] (ab181125)

Intracellular Flow Cytometry analysis of THP1 cells using unpurified ab181125at a 1/10 dilution (red) or a Rabbit monoclonal IgG (negative) (green). Goat anti rabbit IgG (FITC) secondary used at a 1/150 dilution.


Anti-STING antibody [EPR13130] (ab181125)

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

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