

Anti-STING antibody [EPR13130-55] - BSA and Azide free ab242019

KO VALIDATED

Recombinant

RabMAb

9 Images

Overview

Product name	Anti-STING antibody [EPR13130-55] - BSA and Azide free
Description	Rabbit monoclonal [EPR13130-55] to STING - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), IP, ICC/IF, IHC-P, WB
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Wild-type THP-1 cell lysate. IHC-P: Human tonsil, colon cancer and prostate hyperplasia tissues. ICC/IF: THP-1 cells. Flow Cyt (intra): THP-1 cells. IP: THP-1 whole cell lysate.
General notes	<p>ab242019 is the carrier-free version of ab239074.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR13130-55
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab242019 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)		1/500.
IP		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 36 kDa (predicted molecular weight: 42 kDa).

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	Phosphorylated on tyrosine residues upon MHC-II aggregation (By similarity). Phosphorylated on

modifications

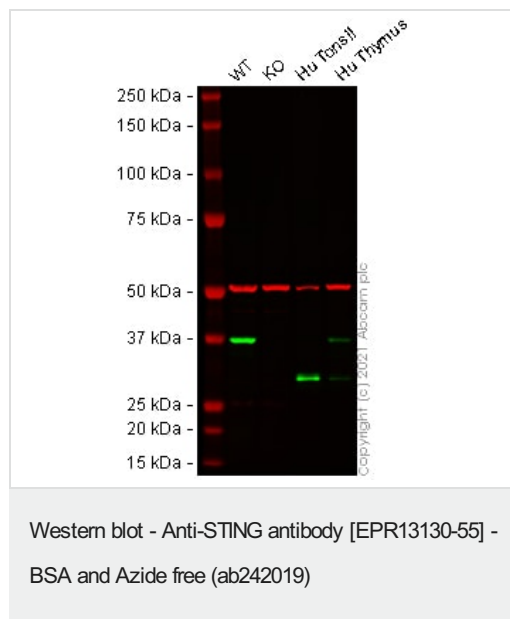
Ser-358 by TBK1, leading to activation and production of IFN-beta.

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, relocates to perinuclear region, where the kinase TBK1 is recruited.

Images



All lanes : Anti-STING antibody [EPR13130-55] ([ab239074](#)) at 1/1000 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

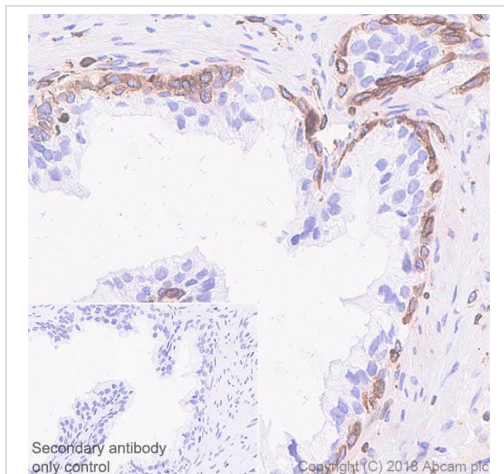
Observed band size: 37 kDa

This data was developed using the same antibody clone in a different buffer formulation ([ab239074](#)).

Lanes 1 - 4: Merged signal (red and green). Green - [ab239074](#) observed at 37 kDa. Red - loading control [ab7291](#) (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

[ab239074](#) 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 [ab239074](#) and [ab7291](#) (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 1000 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.



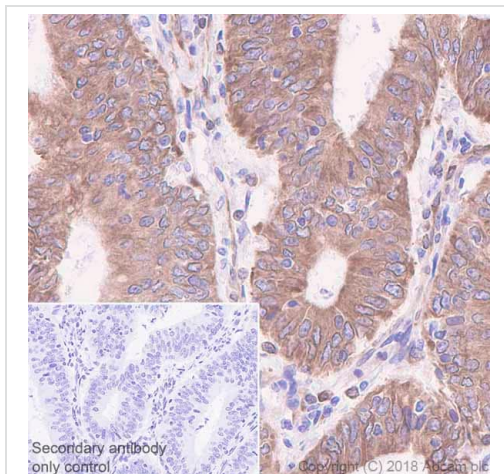
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [EPR13130-55] - BSA and Azide free (ab242019)

Immunohistochemical analysis of paraffin-embedded human prostate hyperplasia tissue labeling TMEM173 with **ab239074** at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining in basal cells of human prostate hyperplasia is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab239074**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



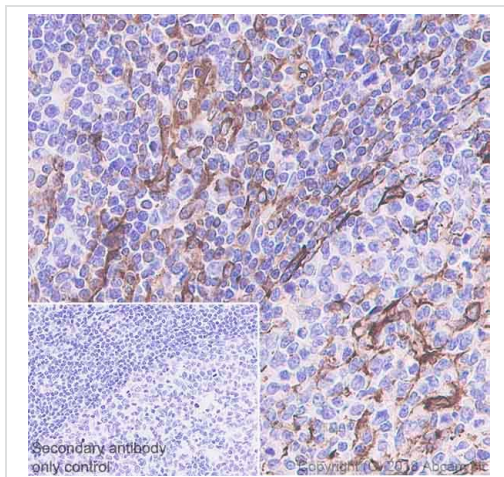
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [EPR13130-55] - BSA and Azide free (ab242019)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling TMEM173 with **ab239074** at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining in human colon cancer (PMID: 26748708). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab239074**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



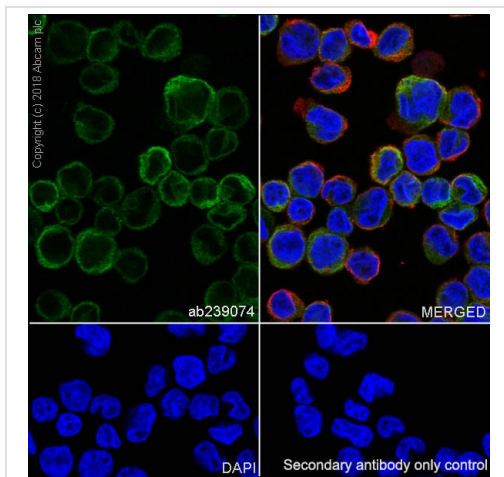
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody [EPR13130-55] - BSA and Azide free (ab242019)

Immunohistochemical analysis of paraffin-embedded human tonsil tissue labeling TMEM173 with **ab239074** at 1/4000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining in human tonsil (PMID:28874664). Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab239074**).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



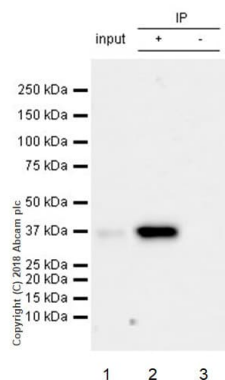
Immunocytochemistry/ Immunofluorescence - Anti-STING antibody [EPR13130-55] - BSA and Azide free (ab242019)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized THP-1 (human monocytic leukemia cell line) cells labeling TMEM173 with **ab239074** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic and membranous staining in THP-1 cell line.

The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab239074**).



Immunoprecipitation - Anti-STING antibody
[EPR13130-55] - BSA and Azide free (ab242019)

TMEM173 was immunoprecipitated from 0.35 mg of THP-1 (human monocytic leukemia cell line) whole cell lysate with **ab239074** at 1/30 dilution. Western blot was performed from the immunoprecipitate using **ab239074** at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/1000 dilution.

Lane 1: THP-1 whole cell lysate 10 µg (Input).

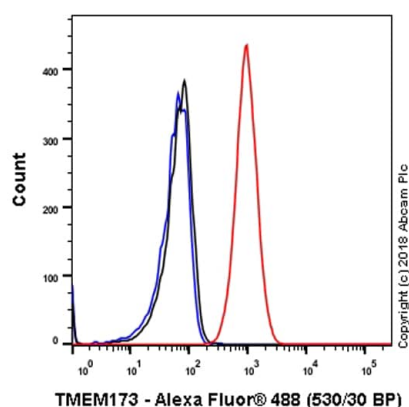
Lane 2: **ab239074** IP in THP-1 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab239074** in THP-1 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab239074**).



Flow Cytometry (Intracellular) - Anti-STING antibody
[EPR13130-55] - BSA and Azide free (ab242019)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized THP-1 (human monocytic leukemia cell line) cell line labeling TMEM173 with **ab239074** at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/2000 dilution was used as the secondary antibody.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab239074**).

Tissue Microarray (TMA) data for ab239074					
Normal tissue samples			Malignant tissue samples		
Human cardiac muscle	✓	Human placenta	✗ (stromal cells ✓)	Clear cell carcinoma of human kidney	✗ (stromal cells ✓)
Human cerebrum	✗	Human skeletal muscle	✗	Human bladder cancer	✗
Human colon	✓	Human skin	✗ (stromal cells ✓)	Human breast carcinoma	✓
Human endometrium	✗	Human spleen	✓	Human cervical carcinoma	✓
Human kidney	✗ (stromal cells ✓)	Human stomach	✗ (stromal cells ✓)	Human colon carcinoma	✓
Human liver	✗ (stromal cells ✓)	Human testis	✗ (stromal cells ✓)	Human endometrial carcinoma	✗ (stromal cells ✓)
Human lung	✓	Human thyroid	✗ (stromal cells ✓)	Human gastric adenocarcinoma	✗ (stromal cells ✓)
Human mammary gland	✗ (stromal cells ✓)	Human tonsil	✓	Human glioma	✗ (stromal cells ✓)
Human pancreas	✗ (stromal cells ✓)			Human hepatocellular carcinoma	✗ (stromal cells ✓)
				Human lung carcinoma	✓
				Human ovarian carcinoma	✓
				Human pancreatic carcinoma	✓
				Human prostatic hyperplasia	✓
				Human thyroid carcinoma	✗ (stromal cells ✓)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-STING antibody
[EPR13130-55] - BSA and Azide free (ab242019)

Tissue Microarrays stained for " Anti-STING antibody [EPR13130-55]" using " **ab239074**" in immunohistochemical analysis. This table provides a detailed overview of positive (tick mark) and negative (cross mark) staining per sample type tested. The sections were pre-treated using Heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0). The sections were incubated with **ab239074** at +4°C overnight followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP polymer).

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 [EPR13130-55] - BSA and Azide free (ab242019)

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

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors