Anti-hSTING-IgG

Monoclonal antibody against human STING

Catalog code: mabg-hstg-2

https://www.invivogen.com/anti-hsting

For research use only, not for diagnostic or therapeutic use

Version 23L11-MM

PRODUCT INFORMATION

Contents: 2 x 100 µg purified anti-hSTING-IgG provided azide-free and lyophilized

Target: Human STING (hSTING) R232 variant (soluble CDN-binding domain)

Specificity: Reacts with the "wild-type" R232 (R71-G230-**R232**-R293) and HAQ (**H71**-**A230**-R232-**Q293**) hSTING variants. This antibody reacts very poorly with murine STING.

Clone: 3B5

Isotype: Mouse IgG1

Light chain type: Kappa

Formulation: 0.2 µm filtered solution in a sodium phosphate buffer with glycine, saccharose, and stabilizing agents

Applications: Detection by Western blot and ELISA

Antibody resuspension (0.1 mg/ml)

Add 1 ml of sterile water per 100 µg vial.

Storage and stability

- Product is shipped at room temperature. Upon receipt, store lyophilized antibody at -20 °C.
- Reconstituted antibody is stable for 1 month at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- This product has been validated by Western blot.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

BACKGROUND

STING (stimulator of interferon genes) is essential for the interferon (IFN) response to cytoplasmic foreign or self-DNA. It directly senses cyclic dinucleotides (CDNs), which are important messengers in bacteria and innate immune agonists in mammals[1]. Several STING variants have been described in the human population. These variants differ in their responses to CDNs. For instance, the variants H232 (R71-G230-**H232**-R293) and HAQ (**H71**-**A230**-R232-**Q293**) are less sensitive to CDNs than the most prevalent variant R232 (R71-G230-**R232**-R293)[2]. Other genetic variations leading to loss or gain of STING functionality have been revealed. For example, the variant S154 (**N154S**) and M155 (**V155M**) contains a gain-of-function mutation resulting in constitutive STING activation and is associated with a chronic autoinflammatory disease, known as STING associated vasculopathy with onset in infancy (SAVI)[3].

1. Sun L. et *al.*, 2013. Cyclic GMP-AMP synthase is a cytosolic DNA sensor that activates the type I interferon pathway. Science. 339:786-91. **2. Yi G. *et al.*, 2013.** Single nucleotide polymorphisms of human STING can affect innate immune response to cyclic dinucleotides. PLOS One. 8:e77846. **3. Liu Y. *et al.*, 2014.** Activated STING in a vascular and pulmonary syndrome. N Engl J Med. 371:507-18.

DESCRIPTION

Anti-hSTING-IgG is a monoclonal mouse IgG1 antibody against human STING (hSTING), a 40-42 kDa transmembrane protein. This antibody was generated by InvivoGen using DNA immunization and screened for its ability to bind hSTING using ELISA. This antibody recognizes the most prevalent isoform "wild-type" R232 (R71-G230-**R232**-R293) and HAQ (**H71**-**A230**-R232-**Q293**) hSTING variants. Importantly, no reactivity was observed with the STING-knockout cells.

Anti-hSTING-IgG is produced in hybridomas and purified by affinity chromatography with protein G. It can be used to detect human STING using ELISA and Western blot.

APPLICATIONS

Anti-hSTING-IgG can be used for Western blot and ELISA.

Indirect ELISA with HRP-conjugated secondary antibody

1. Coat wells of a 96-well plate with 50 µl of recombinant human STING at 1 µg/ml per well and incubate overnight at room temperature (15-25°C). Wash the microtiter plate four times with phosphate-buffered saline (PBS) containing 0.05% Tween® 20 (PBS-T).
2. Add 100 µl PBS containing 1% bovine serum albumin (BSA) to each well to prevent non-specific binding and incubate for 1-2 hours at 15-25°C. Wash the microtiter plate four times with PBS-T.
3. Distribute 50 µl of Anti-hSTING-IgG (1-100 ng/ml final concentration) to each well and incubate for 2 hours at 37°C. Wash the microtiter plate four times with PBS-T.
4. Add 50 µl of HRP-conjugated secondary antibody to each well and incubate for 2 hours at 37°C. Wash the microtiter plate four times with PBS-T.
5. Add HRP substrate and read absorbance using a microplate reader.

Western blot

1. Block PVDF membrane for 1 hour at 15-25°C with 3% w/v skimmed milk diluted in Tris buffered saline containing 0.1% Tween® 20 (TBS-T).
2. Incubate overnight at 4°C with Anti-hSTING-IgG (0.2 µg/ml) diluted in TBS-T. Wash three times with TBS-T.
3. Incubate for 1 hour at 15-25°C with HRP-conjugated anti-mouse IgG1 secondary antibody (1:3000 dilution in TBS-T). Wash three times with TBS-T.
4. Use chemiluminescence reagents to detect the STING protein with a specific band at approximately 40 kDa corresponding to the full-length hSTING protein.

RELATED PRODUCTS

Product	Description	Cat. Code
Mouse IgG1 Control	Isotype control antibody	mabg1-ctrlm

TECHNICAL SUPPORT
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