

PRODUCT INFORMATION



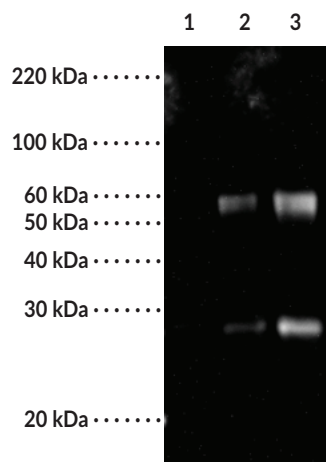
STING M284 variant Polyclonal Antibody

Item No. 24791

Overview and Properties

Contents:	This vial contains 500 µl of peptide affinity-purified antibody.
Synonyms:	Endoplasmic Reticulum Interferon Stimulator, ERIS, Mediator of IRF3 Activation, MITA, MPYS, Stimulator of Interferon Genes, TMEM173, Transmembrane Protein 173
Immunogen:	Synthetic peptide from the internal region of human STING protein containing the M284 mutation
Cross Reactivity:	(-) Wild-type STING
Species Reactivity:	(+) Human
Uniprot No.:	Q86WV6
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, pH 7.2, containing 50% glycerol and 0.02% sodium azide
Host:	Rabbit
Isotype:	IgG
Applications:	Western blot (WB); the recommended starting concentration is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: STING (139-379) (2 µg)
Lane 2: STING M284 variant (138-379) (1 µg)
Lane 3: STING M284 variant (138-379) (2 µg)

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Stimulator of interferon genes (STING) is a component of the innate immune response that binds to cyclic dinucleotides, which are bacterial second messengers, leading to activation of NF- κ B and transcription of immunomodulatory genes, including type I interferon (IFN).¹⁻⁴ The R284M mutation in STING is associated with constitutive activation of downstream signaling. It increases the propensity of STING to dimerize and associate with the kinase TBK1 (Item No. 22817), enhancing the ability of STING to activate IRF3 (Item No. 22811) and NF- κ B (Item No. 10009818) and induce a type I IFN response.⁵ However, the R284M mutation occurs outside of the dimerization region between positions 153-177, so rather than a direct effect on dimerization, it is predicted to promote or inhibit binding of a cellular factor that stabilizes or impairs STING dimerization. Cayman's STING M284 variant Polyclonal Antibody preferentially detects overexpressed STING (R284M) versus wild-type STING by Western blot.

References

1. Sun, L., Wu, J., Du, F., *et al.* Cyclic GMP-AMP synthase is a cytosolic DNA sensor that activates the type I interferon pathway. *Science* **339(6121)**, 786-791 (2013).
2. Wu, J., Sun, L., Chen, X., *et al.* Cyclic GMP-AMP is an endogenous second messenger in innate immune signaling by cytosolic DNA. *Science* **339(6121)**, 826-830 (2013).
3. Konno, H., Konno, K., and Barber, G.N. Cyclic dinucleotides trigger ULK1 (ATG1) phosphorylation of STING to prevent sustained innate immune signaling. *Cell* **155(3)**, 688-698 (2013).
4. Burdette, D.L., Monroe, K.M., Sotelo-Troha, K., *et al.* STING is a direct innate immune sensor of cyclic-di-GMP. *Nature* **478(7370)**, 515-518 (2011).
5. Tang, E.D., and Wang, C.-Y. Single amino acid change in STING leads to constitutive active signaling. *PLoS One* **10(3)**, e0120090 (2015).

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