

# Product Datasheet

## cGAS Antibody - BSA Free

### NBP1-86761

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Updated 3/4/2026 v.20.1

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**NBP1-86761**

cGAS Antibody - BSA Free

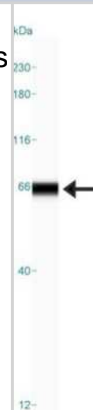
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol

Product Description	
Host	Rabbit
Gene ID	115004
Gene Symbol	CGAS
Species	Human
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: RKQLRLKPFYLVPKHAKEGNGFQEETWRLSFSHIEKEILNNHGKSKTCCENKE EKCCRKDKLMLKYLLEQLKERF

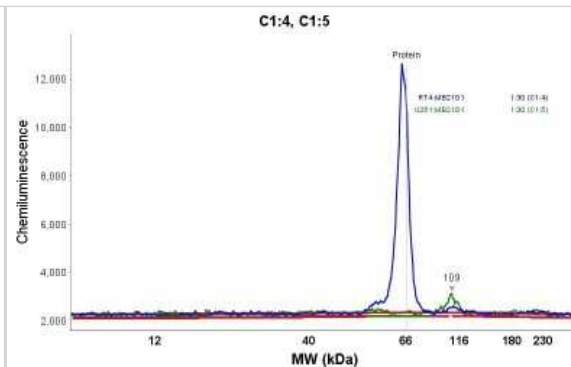
Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 0.04 - 0.4 ug/mL, Simple Western 1:30, Immunohistochemistry Reactivity reported in scientific literature (PMID: 35099823), Immunocytochemistry/ Immunofluorescence Reactivity reported in scientific literature (PMID: 24970844]
Application Notes	In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See <a href="#">Simple Western Antibody Database</a> for Simple Western validation: Tested in RT-4, separated by Size, antibody dilution of 1:30, apparent MW was 65 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue.

**Images**

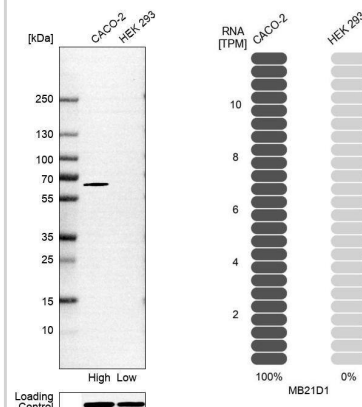
Simple Western: cGAS Antibody [NBP1-86761] - Simple Western lane view shows a specific band for MB21D1 in 0.2 mg/ml of RT-4 lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



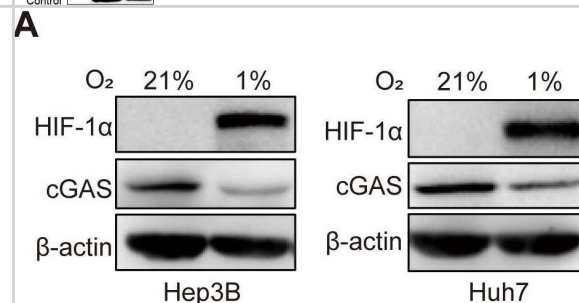
Simple Western: cGAS Antibody [NBP1-86761] - Electropherogram image(s) of corresponding Simple Western lane view. MB21D1 antibody was used at 1:30 dilution on RT-4 lysate(s).



Analysis in human cell line CACO-2 and human cell line HEK 293.



Hypoxia inhibited teniposide-induced cGAS-STING activation in human HCC cells. (A) Hep3B and Huh7 cells were cultured under a normoxic (21% O<sub>2</sub>) or a hypoxic (1% O<sub>2</sub>) condition for 18 hours and the cellular protein expression of HIF-1 $\alpha$  and cGAS was then detected by immunoblotting;  $\beta$ -actin was used as a loading control. (B) Hep3B and Huh7 cells were transfected with HT-DNA (5  $\mu$ g/mL) and the cells were then cultured under either normoxic or hypoxic condition for 24 hours; the cellular protein expression of p-IRF3 was detected by immunoblotting. (C) Hep3B and Huh7 cells were treated with teniposide at each IC<sub>50</sub>, followed by either normoxic or hypoxic culture for 24 hours, and the cellular protein expression of p-IRF3 and p-P65 was then detected by immunoblotting. (D) Hep3B and Huh7 cells were treated as in (C) and the supernatant IFN- $\beta$  was then measured by ELISA. (E-F) Hep3B and Huh7 cells were treated as in (C) and the mRNA expression of IFIT-1 and IFIT-2 (E) and CCL5 and CXCL10 (F) was then measured by RT-qPCR. Data in (A), (B) and (C) are representative of three independent experiments. Data in (D), (E) and (F) are shown as mean $\pm$ SD of three independent experiments. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001. cGAS-STING, cyclic GMP-AMP synthase-stimulator of interferon genes; HCC, hepatocellular carcinoma; HIF-1 $\alpha$ , hypoxia inducible factor 1 $\alpha$ ; HT-DNA, herring testes-DNA; IC<sub>50</sub>, 50% inhibitory concentration; IFN- $\beta$ , interferon  $\beta$ ; IRF3, interferon regulatory factor 3; Rel. expression, relative expression; RT-qPCR, real time quantitative PCR; Teni, teniposide. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36002188>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Deater M, Tamhankar M, Lloyd RE. TDRD3 is an antiviral restriction factor that promotes IFN signaling with G3BP1 PLOS Pathogens 2022-01-27 [PMID: 35085371] (Western Blot)

Nicole Berndt, Christine Wolf, Kristina Fischer, Emanuel Cura Costa, Peter Knuschke, Nick Zimmermann, Franziska Schmidt, Martin Merkel, Osvaldo Chara, Min Ae Lee-Kirsch, Claudia Günther Photosensitivity and cGAS-Dependent IFN-1 Activation in Patients with Lupus and TREX1 Deficiency. The Journal of investigative dermatology 2022-05-09 [PMID: 34400195]

Li K, Gong Y, Qiu D et al. Hyperbaric oxygen facilitates teniposide-induced cGAS-STING activation to enhance the antitumor efficacy of PD-1 antibody in HCC Journal for immunotherapy of cancer 2022-08-01 [PMID: 36002188] (WB)

Lohinai Z, Dora D, Caldwell C et al. Loss of STING expression is prognostic in non-small cell lung cancer Journal of surgical oncology 2022-01-31 [PMID: 35099823] (IF/IHC, Human)

Luzwick JW, Dombi E, Boisvert RA et al. MRE11-dependent instability in mitochondrial DNA fork protection activates a cGAS immune signaling pathway Science advances 2021-12-17 [PMID: 34910513]

Chen H, Chen H, Zhang J et al. cGAS suppresses genomic instability as a decelerator of replication forks Sci Adv 2020-10-01 [PMID: 33055160] (ICC/IF, Human)

Schwertner B, Lindner G, Toledo Stauner C et al. Nectin-1 Expression Correlates with the Susceptibility of Malignant Melanoma to Oncolytic Herpes Simplex Virus In Vitro and In Vivo Cancers 2021-06-19 [PMID: 34205379] (IHC-P, Human)

Verrier E R, Yim S A et al. Hepatitis B Virus Evasion From Cyclic Guanosine Monophosphate-Adenosine Monophosphate Synthase Sensing in Human Hepatocytes. Hepatology 2018-01-11 [PMID: 29679386] (WB, Human)

Hansen K, Prabakaran T, Laustsen A et al. Listeria monocytogenes induces IFN-beta expression through an IFI16-, cGAS- and STING-dependent pathway. EMBO J 2014-08-01 [PMID: 24970844] (ICC/IF, Human)

Berg RK, Rahbek SH, Kofod-Olsen E et al. T Cells Detect Intracellular DNA but Fail to Induce Type I IFN Responses: Implications for Restriction of HIV Replication. PLoS One 2014-01-01 [PMID: 24404168]

Schoggins JW, MacDuff DA, Imanaka N et al. Pan-viral specificity of IFN-induced genes reveals new roles for cGAS in innate immunity. Nature 2014-01-30 [PMID: 24284630] (WB)





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### **Products Related to NBP1-86761**

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NBP1-86761PEP	cGAS Recombinant Protein Antigen
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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