

Rabbit anti-Human CGAS Polyclonal Antibody | anti-CGAS antibody

Anti-CGAS Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125828	Rabbit	Human	ELISA, Flow Cytometry, Functional Assay, Immunofluorescence, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

CGAS; Polyclonal Antibody; Anti-CGAS Antibody; C6orf150; MB21D1; Cyclic GMP-AMP synthase; cGAMP synthase; cGAS; h-cGAS; EC 2. 7. 7. 86; 2'3'-cGAMP synthase; Mab-21 domain-containing protein 1; cyclic GMP-AMP synthase; anti-CGAS antibody

PRODUCT SPECIFICATIONS

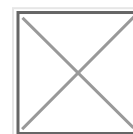
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for CGAS detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-CGAS antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), IF (Immunofluorescence), ICC (Immunocytochemistry), WB (Western Blot)
Immunogen	E Coli-derived human CGAS recombinant protein (Position: L208-F522) Human CGAS shares 71.1% amino acid (aa)sequence identity with mouse CGAS. .
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Lab recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (please inquire) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (please inquire) for ICC.
Preparation and Storage	Store at -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for 6 months. Avoid repeated freezing and thawing.

IMAGES



FCM/FACS (Flow Cytometry)

Figure 4. Flow Cytometry analysis of U937 cells using anti-CGAS antibody (AAA125828).Overlay histogram showing U937 cells stained with AAA125828 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CGAS Antibody (AAA125828, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



FCM/FACS (Flow Cytometry)

Figure 3. Flow Cytometry analysis of THP-1 cells using anti-CGAS antibody (AAA125828).Overlay histogram showing THP-1 cells stained with AAA125828 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CGAS Antibody (AAA125828, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IF (Immunofluorescence)

Figure 2. IF analysis of CGAS using anti- CGAS antibody (AAA125828).CGAS was detected in immunocytochemical section of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL rabbit anti- CGAS Antibody (AAA125828) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



WB (Western Blot)

Figure 1. Western blot analysis of CGAS using anti-CGAS antibody (AAA125828).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.Lane 1: human Hela whole cell lysatesLane 2: human Caco-2 whole cell lysatesLane 3: human A431 whole cell lysatesLane 4: rat lung tissue lysatesLane 5: mouse RAW264. 7 whole cell lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-CGAS antigen affinity purified polyclonal antibody (Catalog # AAA125828) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CGAS at approximately 62KD. The expected band size for CGAS is at 62KD.

ADDITIONAL INFORMATION

Related Product Information for anti-CGAS antibody	cGAS (cyclic GMP-AMP synthase), also known as MB21D1 (Mab-21 domain containing 1), h-cGAS or C6orf150, is a 522 amino acid cytoplasmic nucleotidyltransferase that catalyzes the formation of cyclic GMP-AMP (cGAMP) from ATP and GTP. cGAS is suggested to have antiviral activity by acting as a key cytosolic DNA sensor. cGAS binds to cytosolic DNA, which leads to cGAMP synthesis and activation of TMEM173, thereby trigger type-I interferon production. Expressed in monocytic cell line THP1, cGAS exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 6q13.
References	1. Ablasser, A., Hemmerling, I., Schmid-Burgk, J. L., Behrendt, R., Roers, A., Hornung, V. TREX1 deficiency triggers cell-autonomous immunity in a cGAS-dependent manner. J. Immun. 192: 5993-5997, 2014. 2. Ablasser, A., Schmid-Burgk, J. L., Hemmerling, I., Horvath, G. L., Schmidt, T., Latz, E., Hornung, V. Cell intrinsic immunity spreads to bystander cells via the intercellular transfer of cGAMP. Nature 503: 530-534, 2013. 3. Andreeva, L., Hiller, B., Kostrewa, D., Lassig, C., de Oliveira Mann, C. C., Drexler, D. J., Maiser, A., Gaidt, M., Leonhardt, H., Hornung, V., Hopfner, K. -P. cGAS senses long and HMGB/TFAM-bound U-turn DNA by forming protein-DNA ladders Nature 549: 394-398, 2017.

NCBI AND UNIPROT INFORMATION

NCBI GI #	115511030
NCBI GeneID	115004
NCBI Accession #	NP_612450
NCBI GenBank Nucleotide #	NM_138441.2
UniProt Accession #	Q8N884; Q14CV6; Q32NC9; Q5SWL0; Q5SWL1; Q96E45; L0L2J9
NCBI Official Full Name	cyclic GMP-AMP synthase
NCBI Official Synonym Full Names	Mab-21 domain containing 1
NCBI Official Symbol	MB21D1
NCBI Official Synonym Symbols	cGAS; h-cGAS; C6orf150
NCBI Protein Information	cyclic GMP-AMP synthase
UniProt Protein Name	Cyclic GMP-AMP synthase
UniProt Gene Name	MB21D1
UniProt Synonym Gene Names	C6orf150; cGAMP synthase; cGAS; h-cGAS
UniProt Entry Name	CGAS_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cgas-antibody-direct-elisa-flow-cytometry-immunofluorescence-immunocytochemistry-western-blot-elisa/125828>