

# Recombinant Human cyclic GMP-AMP synthase Protein, His tagged

**Cat. No.** CGAS-201H    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant human CGAS protein (Q8N884-1) (Asp 157-Phe 522) with a His tag at the C-terminus was expressed in E. coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>ProteinLength</b>	157-522aa
<b>Description</b>	Nucleotidyltransferase that catalyzes the formation of cyclic GMP-AMP (2',3'-cGAMP) from ATP and GTP and plays a key role in innate immunity. Catalysis involves both the formation of a 2',5' phosphodiester linkage at the GpA step and the formation of a 3',5' phosphodiester linkage at the ApG step, producing c[G (2',5')pA (3',5')p]. Acts as a key DNA sensor: directly binds double-stranded DNA (dsDNA), inducing the formation of liquid-like droplets in which CGAS is activated, leading to synthesis of 2',3'-cGAMP, a second messenger that binds to and activates STING1, thereby triggering type-I interferon production. Acts as a key foreign DNA sensor, the presence of double-stranded DNA (dsDNA) in the cytoplasm being a danger signal that triggers the immune responses.
<b>Tag</b>	C-His
<b>Molecular Mass</b>	44.4 kDa

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

<b>Endotoxin</b>	Less than 1.0 EU/μg by the LAL method.
<b>Purity</b>	>95% as determined by SDS-PAGE.
<b>Storage</b>	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.
<b>Storage Buffer</b>	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
<b>Reconstitution</b>	Reconstitute at 250 μg/mL in sterile water.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	CGAS cyclic GMP-AMP synthase [ Homo sapiens (human) ]
<b>Official Symbol</b>	CGAS
<b>Synonyms</b>	CGAS; cyclic GMP-AMP synthase; D4; MB21D1; h-cGAS; C6orf150; cyclic GMP-AMP synthase; 2'3'-cGAMP synthase; DANGER family member 4; Mab-21 domain containing 1; cGAMP synthase; mab-21 domain-containing protein 1; protein MB21D1; EC 2.7.7.86
<b>Gene ID</b>	115004
<b>mRNA Refseq</b>	NM_138441.3
<b>Protein Refseq</b>	NP_612450.2
<b>MIM</b>	613973

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UniProt ID

Q8N884

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