

cGAS Recombinant Rabbit mAb

Catalog # AP97054

Product Information

Application	WB
Reactivity	Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	59 KDa
Physical State	Liquid
Immunogen	Recombinant mouse MB21D1 protein
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the mab-21 family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus. Porphyrria cutanea tarda is associated with chromosome 6 through the HFE gene which, when mutated, predisposes an individual to developing this porphyria. Notably, the PARK2 gene, which is associated with Parkinson's disease, and the genes encoding the major histocompatibility complex proteins, which are key molecular components of the immune system and determine predisposition to rheumatic diseases, are also located on chromosome 6. Stickler syndrome, 21-hydroxylase deficiency and maple syrup urine disease are also associated with genes on chromosome 6. A bipolar disorder susceptibility locus has been identified on the q arm of chromosome 6. The C6orf150 gene product has been provisionally designated C6orf150 pending further characterization.

Additional Information

Other Names	C6orf150; D4; MB21D1; h-cGAS; CGAS_HUMAN; CGAS; cGAMP synthase; 2'3'-cGAMP synthase; Mab-21 domain-containing protein 1; 2.7.7.86; cyclic GMP-AMP synthase; chromosome 6 open reading frame 150; Mab-21 domain containing 1; DANGER family member 4
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Name	cGAS Recombinant Rabbit mAb
Function	Nucleotidyltransferase that catalyzes the formation of cyclic GMP-AMP

(cGAMP) from ATP and GTP. 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]. Has antiviral activity by acting as a key cytosolic DNA sensor, the presence of double-stranded DNA (dsDNA) in the cytoplasm being a danger signal that triggers the immune responses. Binds cytosolic DNA directly, leading to activation and synthesis of cGAMP, a second messenger that binds to and activates TMEM173/STING, thereby triggering type-I interferon production. cGAMP can be transferred between cells by virtue of packaging within viral particles contributing to IFN-induction in newly infected cells in a cGAS-independent but TMEM173/STING-dependent manner (PubMed:26229115). (Microbial infection) Upon M.tuberculosis infection THP-1 cells knocked-out for this gene have impaired type-I interferon production (IF-1 beta), nor do they produce type-I IFN upon transfection with dsDNA (PubMed:26048138).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.