

Datasheet for ABIN2746464

anti-C6orf150 antibody (AA 450-500)[Go to Product page](#)**1** Publication

Overview

Quantity:	100 µg
Target:	C6orf150
Binding Specificity:	AA 450-500
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This C6orf150 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA, Immunoprecipitation (IP)

Product Details

Immunogen:	Synthetic peptide taken within amino acid region 450-500 on mouse cGAS protein.
Isotype:	IgG
Cross-Reactivity:	Mouse (Murine), Rat (Rattus)
Characteristics:	<p>Cyclic-GAS-selective antibodies were generated against peptides taken from the mouse/rat and human cGAS protein. The cGAS-selective antibodies were affinity purified on an immobilized antigen based affinity matrices, the isolated antibodies were then stabilized in antibody stabilization buffer for long-term storage. The anti-cGAS-selective antibodies are fully characterized for applications in western blotting and ELISA at the recommended dilutions. The supplier provides cGAS western blot positive controls samples in SDS-PAGE sample buffer.</p> <p>Synonyms: cGMP Synthase, h-cGAS, Mab-21 domain-containing protein 1, chromosome 6 open reading frame 150, C7Orf150, MB21D1</p>

Product Details

Purification: Affinity Purified

Target Details

Target: C6orf150

Alternative Name: C6orf150 ([C6orf150 Products](#))

Background: The cyclic guanosine monophosphate-adenosine monophosphate (GMP-AMP) synthase (cGAS) belongs to the nucleotidyltransferase family, catalyzes the formation of cGMP-AMP (cGAMP) from ATP and GTP. The presence of cytosolic DNA in the cytoplasm of mammalian cells is a danger signal that triggers the most immune responses which produces the type I interferons. The DNA signaling pathway requires an adapter protein STING and transcription factor IRF3. The mechanism through which interferons are induced by cytosolic DNA involves cyclic GMP-AMP synthase which binds and activates the endoplasmic reticulum adapter protein STING, also known as MITA, MPYS, or ERIS that activates the transcription activity of interferon synthetases. The STING recruits and activates the cytosolic kinase IKK and TBK1, which activates the transcription factor NF- κ B and transcription factor IRF3. The NF- κ B and IRF3 enters the nucleus and in concert induce interferons and other cytokines. The DNA-dependent RNA Polymerase III also acts as a sensor and synthesizes AT-rich DNA such as poly(dA:dT) into an RNA ligand that stimulates RIG-1 pathway to induce interferons. Since most DNA does not activate DNA-dependent RNA polymerase and downstream RIG1 pathways, but instead activate STING pathway via cGAS and cGAMP stimulation for interferon induction. DNA can be introduced by viral or bacterial infection, or leakage from nucleus or mitochondria under some pathological conditions that cause autoimmune disease like Lupus. Cytosolic cGMP-AMP synthesized in response to DNA by cGAS acts as a second messenger in innate immune signaling. cGAS gene encodes for a 522 AA protein that has a Mab-21 motif commonly found in *C. elegans* that is required for choice of alternate cell fates in male tail cells.

UniProt: [Q8C6L5](#)

Pathways: [Activation of Innate immune Response](#)

Application Details

Application Notes: Antibodies were tested in ELISA and western blotting applications at 1:500 dilution using ABIN1686780 samples. Antibody dilutions for these antibodies are for reference only, investigators are expected to determine the optimal conditions. Application of this antibody in other protocols has not yet tested.

Application Details

WB: > 1:500

IMM & IP pull-down assays: N.D.

IHC: N.D. .

Investigators using this antibody in protocols other than listed above can request a complimentary sample of this antibody. N.D. not necessarily means the antibody is not suitable for that application, it simply means we have not yet characterized the antibody in that application.

The antibody hcGAS-112AP labels a strong band of cGAS of 64 kDa in ABIN1686780 samples and in several cell lines. The antibody also labels weakly 78 and 90 kDa bands, the identity of these bands are not known at this time.

Restrictions: For Research Use only

Handling

Format: Liquid

Concentration: 0.6 µg/µL

Storage: -20 °C

Storage Comment: Storage of very dilute antibody solutions is not recommended.

Publications

Product cited in: Doi, Iijima, Kano, Ishizaka: "Viral protein R of HIV type-1 induces retrotransposition and upregulates glutamate synthesis by the signal transducer and activator of transcription 1 signaling pathway." in: **Microbiology and immunology**, Vol. 59, Issue 7, pp. 398-409, (2016) ([PubMed](#)).