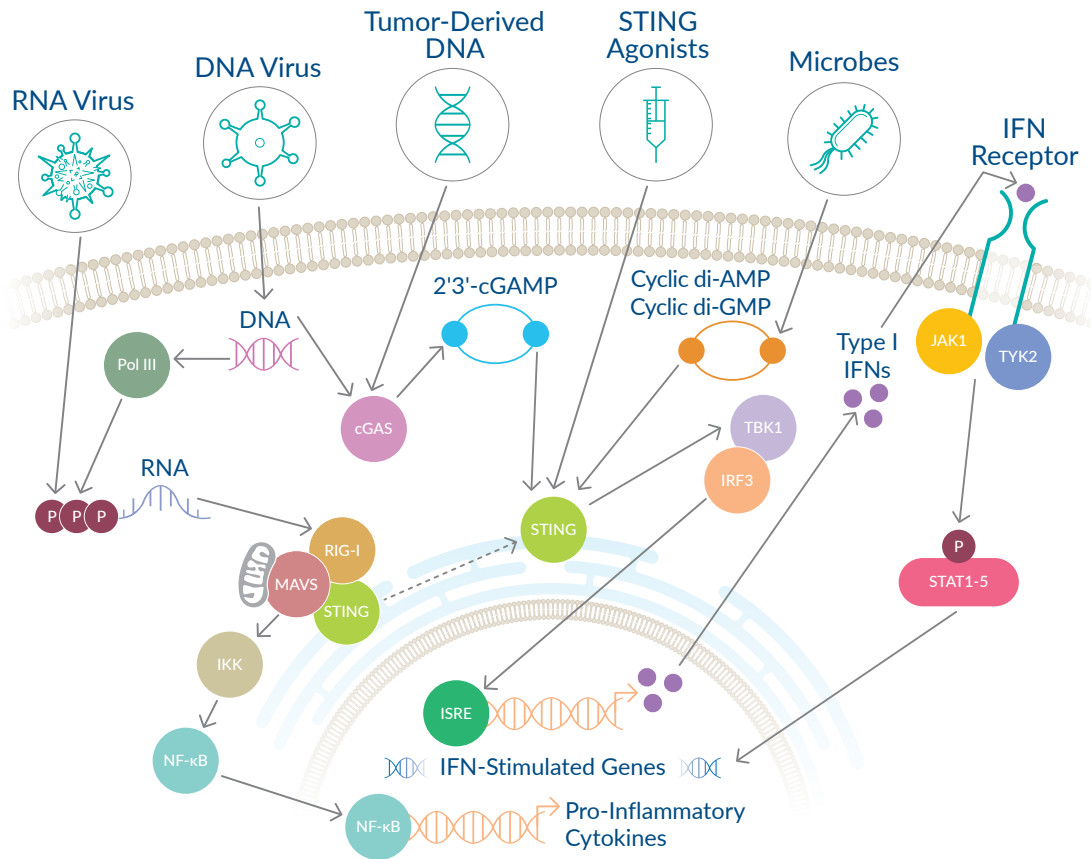


STING Signaling Pathway

STimulator of INterferon Genes and the innate immune response



Cayman offers a dedicated tool set to study STING, a central mediator of the innate immune response. STING can induce the expression of various interferons, cytokines, and T cell recruitment factors that strengthen immune activity. STING agonists also have the potential to enhance the initial anticancer response. Cayman offers various cyclic dinucleotides (CDNs), recombinant STING variants, ELISA kits to measure bacterial and mammalian CDNs, and additional key proteins and antibodies to study this area of therapeutic interest.



The mammalian cytosolic DNA sensor cGAS signals through the adaptor protein STING. STING is also a direct sensor of bacterial and mammalian CDNs. Irrespective of cell type or DNA sequence, activation of STING through the cGAS-cGAMP-STING signaling pathway is essential for DNA-mediated immune responses. The cytosolic RNA sensor RIG-I signals through the adaptor protein MAVS to trigger signaling cascades common to STING that lead to the production of type I IFNs and pro-inflammatory cytokines.

Quantify mammalian and bacterial CDNs detected by STING

2'3'-cGAMP ELISA Kit Item No. 501700

For the quantification of 2'3'-cGAMP in mammalian cell lysates

Cyclic di-GMP ELISA Kit Item No. 501780

For the quantification of cyclic di-GMP in bacterial cell lysates

Cyclic di-AMP ELISA Kit Item No. 501960

For the quantification of cyclic di-AMP in bacterial cell lysates

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CDNs, cGAMPs, and Other STING Activators

Item No.	Product Name
17753	Cyclic di-AMP (sodium salt)
17144	Cyclic di-GMP (sodium salt)
22419	2'2'-cGAMP (sodium salt)
19887	2'3'-cGAMP (sodium salt)

Item No.	Product Name
17966	3'3'-cGAMP (sodium salt)
28054	diABZI STING Agonist 3 (hydrochloride)
14617	DMXAA
22353	G10

STING inhibitors and IFN pathway modulators are available at www.caymanchem.com

Human STING variations that affect CDN binding and STING activation

Item No.	Product Name	Variant/Mutation	Key Features
22816	STING R232 variant (human recombinant)	R232	wild-type
22815	STING H232 variant (human recombinant)	R232H	less dominant allele
15139	STING H232 variant; SUMO-tagged (human recombinant)	R232H; SUMO-tagged	SUMOpro-tagged
23592	STING AQ variant (human recombinant)	G230A, R293Q	reduced IFN response
23594	STING M284 variant (human recombinant)	R284M	constitutively active
23593	STING R224 variant (human recombinant)	K224R	reduced ubiquitination
25306	STING A162 variant (human recombinant)	S162A	binds DMXAA

Learn how amino acid variations affect innate immune response to foreign DNA at www.caymanchem.com/STINGvariants

Upstream/Downstream Proteins in the STING Pathway

Item No.	Product Name	Amino Acids	Purity
22810	cGAS (human recombinant)	2-522 (full length)	≥90%
25001	cGAS (161-522) (human recombinant)	161-522 (truncated)	≥90%
22809	CdnP (<i>Mycobacterium tuberculosis</i> strain ATCC 25618/H37Rv recombinant)	1-336 (full length)	≥70%
25620	RIG-I helicase domain (human recombinant)	232-794 (truncated)	≥80%
22817	TBK1 (human recombinant)	1-729 (full length)	≥50%
22811	IRF3 (human recombinant)	1-427 (full length)	≥85%
23590	IRF3 (S386A, S396A mutant; human recombinant)	1-427 (full length)	≥75%

cGAS, RIG-I, STING, IRF3, and IKKγ Antibodies

Item No.	Product Name	Immunogen	Host	Species Reactivity	Application(s)
23853	cGAS Monoclonal Antibody (Clone 5G10)	Full length human recombinant protein	Mouse	(+) Human	IF, IP, WB
25300	RIG-I Monoclonal Antibody (Clone 1E3)	Recombinant human RIG-I protein (AA 232-794)	Mouse	(+) Human (+) Mouse	ELISA, IHC, WB
17857	STING Polyclonal Antibody	Human recombinant STING	Rabbit	(+) Human	ELISA, IP, WB
24791	STING M284 variant Polyclonal Antibody	Synthetic peptide from the STING R284M variant	Rabbit	(+) Human	WB
17856	STING Monoclonal Antibody (Clone 2C8)	Human recombinant STING (AA 139-379)	Mouse	(+) Human	ELISA, IHC, WB
24937	IRF3 Polyclonal Antibody	Human recombinant IRF3	Rabbit	(+) Human (+) Green monkey	ELISA, IHC, WB
13931	IKKγ Monoclonal Antibody (Clone 72C627)	His-tagged, full length human IKKγ	Mouse	(+) Human (+) Mouse	WB

To view a complete list of our STING research products, visit us online at www.caymanchem.com

Distributed by:



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