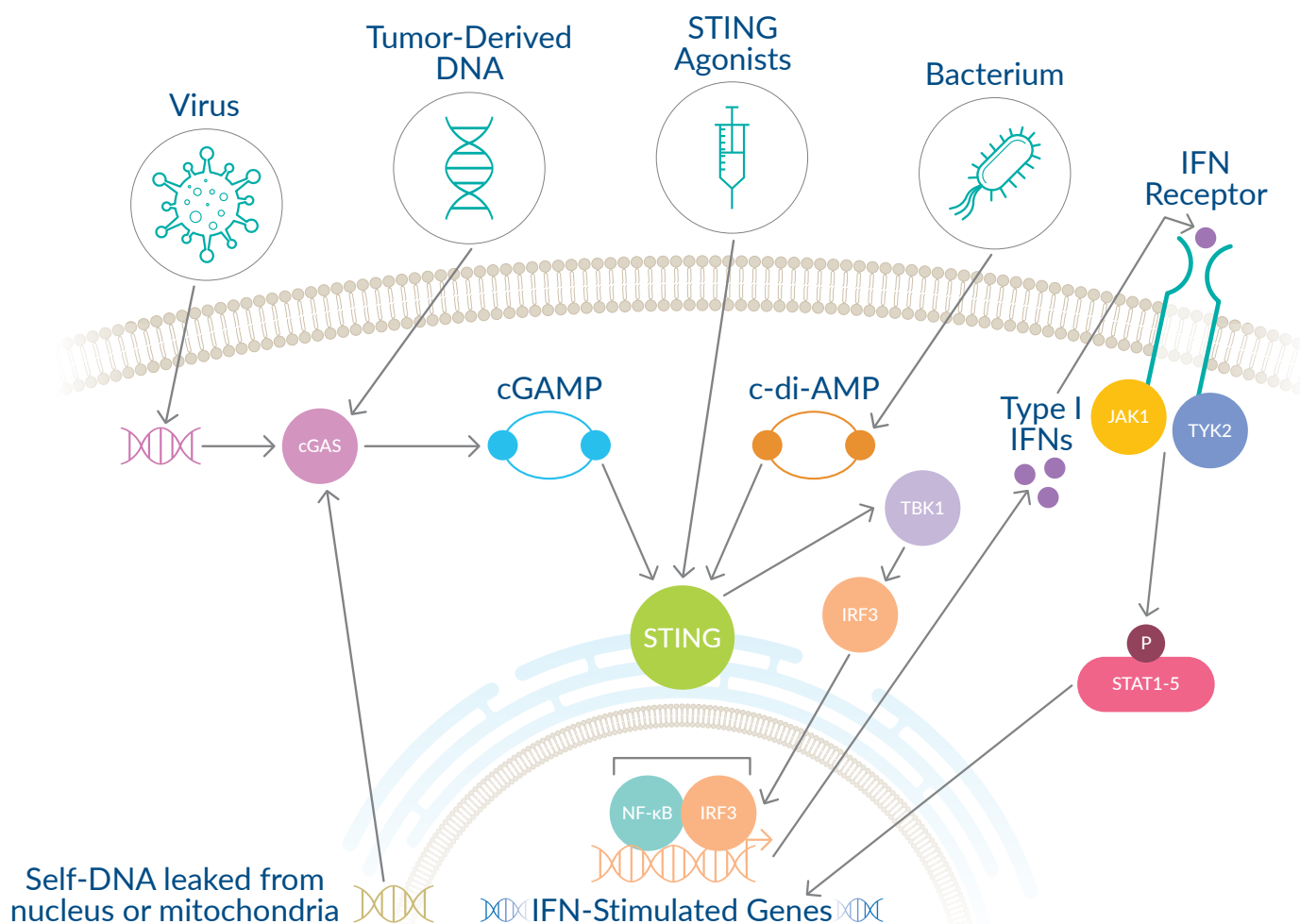


STING Signaling Pathway

STimulator of INTERferon Genes and the innate immune response



STING is a central mediator of the innate immune response, which 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 recombinant proteins for many different variants of human STING as well as various STING ligands and related polyclonal antibodies and assay kits.



The mammalian cytosolic DNA sensor cGAS signals through the adaptor protein STING. STING is also a direct sensor of bacterial and mammalian cyclic dinucleotides. Irrespective of cell type or DNA sequence, activation of STING through the cGAS-cGAMP-STING signaling pathway is essential for DNA-mediated immune responses.

Human STING Variants

STING variations affect cyclic dinucleotide recognition and signal transduction. Cayman offers the two most prevalent naturally occurring STING isoforms: R232 and H232.

STING (R232 variant; human recombinant) - Item No. 22816

STING (H232 variant; human recombinant) - Item No. 22815

Distributed by:



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Proteins

Item No.	Product Name	Amino Acids	Purity
22809	CdnP (<i>Mycobacterium tuberculosis</i> strain ATCC 25618/H37Rv recombinant)	Full length (1-336)	≥90%
22810	cGAS (human recombinant)	Full length (2-543)	≥90%
22811	IRF3 (human recombinant)	Full length (1-427)	≥85%
22815	STING (H232 variant; human recombinant)	138-379 (N-terminal truncation) H232 variant	≥85%
22816	STING (R232 variant; human recombinant)	138-379 (N-terminal truncation) R232 variant	≥90%

BULK & CUSTOM ORDERS AVAILABLE

Email us at sales@caymanchem.com

STING Agonists

Item No.	Product Name	Summary
17753	Cyclic di-AMP	A bacteria-specific second messenger detected by STING, triggering the expression of interferon genes in mammalian cells
17144	Cyclic di-GMP	A bacteria-specific second messenger detected by STING, triggering the expression of interferon genes in mammalian cells
22485	Cyclic di-IMP (sodium salt)	A synthetic second messenger structurally related to cyclic di-AMP and cyclic di-GMP
22419	2'2'-cGAMP	A synthetic cGAMP that binds STING ($K_d = 287$ nM) and induces IFN- β production ($EC_{50} = 15.8$ nM) in L929 cells
19887	2'3'-cGAMP	A second messenger produced by mammalian cGAS in response to the presence of DNA; binds tightly to STING ($K_d = 3.79$ nM) and induces IFN- β production ($EC_{50} = 19.4$ nM) in L929 cells
17966	3'3'-cGAMP	A bacteria-derived cGAMP that triggers the expression of interferon genes in mammalian cells
14617	DMXAA	A mouse-specific STING activator that triggers the TBK1/IRF3 signaling pathway in leukocytes, inducing IFN production
22353	G10	An indirect activator of STING signaling that induces IRF3- and IFN-dependent transcription in human fibroblasts, PBMCs, and HUMECS

IRF3 Activators

Item No.	Product Name	Summary
22441	KIN1400	Induces IRF3-dependent innate immune antiviral genes and IFN β expression
21790	KIN1408	Drives IRF3 activation

IFN Pathway Modulators

Item No.	Product Name	Summary
17869	Dimethyl biphenyl-4,4'-dicarboxylate	Stimulates JAK/STAT signaling and induces the expression of IFN α -stimulated genes
16881	Polyinosinic-polycytidylic Acid (potassium salt)	A synthetic dsRNA that activates NF- κ B, induces IFN α , promotes dendritic cell maturation, and stimulates both innate and adaptive immunity
20449	RO8191	An agonist of IFN α receptor type 2 with antiviral activity
22402	StA-IFN-1	Inhibits the IFN induction pathway ($IC_{50} = 4.1$ μ M)

Antibodies

Item No.	Summary
17857	STING Polyclonal Antibody
13593	Toll-Like Receptor 9 Monoclonal Antibody (Clone 26C593.2)

Assay Kits

Item No.	Summary
10006912	NF- κ B (human p50) Transcription Factor Assay Kit
10007889	NF- κ B (p65) Transcription Factor Assay Kit



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