STING

Stimulator of Interferon Genes; TMEM173; MITA; ERIS; MPYS

Stimulator of interferon genes (STING) is an integral ER-membrane protein that can be activated by 2'3'-cGAMP synthesized by cyclic guanosine monophosphate-adenosine monophosphate synthase (cGAS) upon binding of double-stranded DNA. It activates interferon (IFN) and inflammatory cytokine responses to defend against infection by microorganisms.

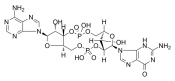
STING is a key cytosolic receptor for small nucleotides and plays a key role in anticancer and antiviral immunity. STING signaling pathway is also a critical link between innate and adaptive immunity, and induces anti-tumor immune responses. STING agonists, such as endogenous cyclic dinucleotide (CDN) cyclic GMP-AMP (cGAMP), have been used in diverse research for immunogenic tumor clearance, antiviral treatments and vaccine adjuvants.

STING Inhibitors, Agonists, Antagonists & Activators

2',3'-cGAMP

(2'-3'-cyclic GMP-AMP) Cat. No.: HY-100564

2',3'-cGAMP (2'-3'-cyclic GMP-AMP) is a endogenous cGAMP in mammalian cells. 2',3'-cGAMP binds to **STING** with a high affinity and is a potent inducer of **interferon-β (IFNβ)**. 2',3'-cGAMP is produced in mammalian cells in response to DNA in the cytoplasm.

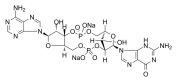


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

2',3'-cGAMP sodium

(2'-3'-cyclic GMP-AMP sodium) Cat. No.: HY-100564A

2',3'-cGAMP sodium (2'-3'-cyclic GMP-AMP sodium) is a endogenous cGAMP in mammalian cells. 2',3'-cGAMP sodium binds to **STING** with a high affinity and is a potent inducer of **interferon-β (IFNβ)**. 2',3'-cGAMP sodium is produced in mammalian cells in response to DNA in the cytoplasm.

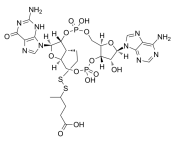


Purity: 98.82%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

2',3'-cGAMP-C2-PPA

Cat. No.: HY-141662

2',3'-cGAMP-C2-PPA (45), A cyclic di-nucleotide, is a **STING** agonist (US20210015941A1). 2',3'-cGAMP-C2-PPA is a **drug-linker conjugate for ADC** that can be used in synthesis of antibody-drug conjugates for the targeted treatment of cancer.

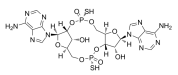


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

ADU-S100

(MIW815; ML RR-S2 CDA) Cat. No.: HY-12885

ADU-S100 (MIW815), an activator of stimulator of interferon genes (**STING**), leads to potent and systemic tumor regression and immunity.

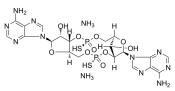


Purity: 99.53%
Clinical Data: Phase 2
Size: 1 mg, 5 mg

ADU-S100 ammonium salt

(MIW815 ammonium salt; ML RR-S2 CDA ammonium salt) Cat. No.: HY-12885B

ADU-S100 ammonium salt (MIW815 ammonium salt), an activator of stimulator of interferon genes (**STING**), leads to potent and systemic tumor regression and immunity.

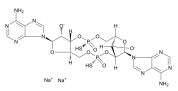


Purity: 99.85%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

ADU-S100 disodium salt

(MIW815 disodium salt; ML RR-S2 CDA disodium salt) Cat. No.: HY-12885A

ADU-S100 disodium salt (MIW815 disodium salt) is an activator of stimulator of interferon genes (**STING**).

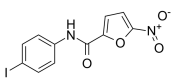


Purity: 98.83%
Clinical Data: Phase 2
Size: 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

C-176

Cat. No.: HY-112906

C-176 is a strong and covalent mouse **STING** inhibitor.

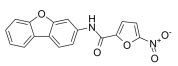


Purity: 99.45%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

C-178

Cat. No.: HY-123963

C-178 is a potent and selective covalent inhibitor of **STING**. C-178 binds to Cys91 and suppresses the STING responses elicited by distinct bona fide activators in mouse but not human.</br>.

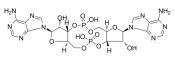


Purity: 99.90%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

c-di-AMP

(Cyclic diadenylate; Cyclic-di-AMP) Cat. No.: HY-12326

c-di-AMP (Cyclic diadenylate) is a **STING** agonist, which binds to the transmembrane protein STING thereby activating the TBK3-IRF3 signaling pathway, subsequently triggering the production of type I IFN and TNF.

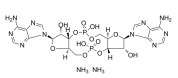


Purity: 99.29%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

c-di-AMP diammonium

(Cyclic diadenylate diammonium; Cyclic-di-AMP diammonium) Cat. No.: HY-12326B

c-di-AMP diammonium is a **STING** agonist, which binds to the transmembrane protein STING thereby activating the TBK3-IRF3 signaling pathway, subsequently triggering the production of type I IFN and TNF.

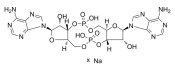


Purity: 98.81%
Clinical Data: No Development Reported
Size: 500 μg, 1 mg

c-di-AMP sodium

(Cyclic diadenylate sodium; Cyclic-di-AMP sodium) Cat. No.: HY-12326A

c-di-AMP (Cyclic diadenylate) sodium is a **STING** agonist, which binds to the transmembrane protein STING thereby activating the TBK3-IRF3 signaling pathway, subsequently triggering the production of type I IFN and TNF.

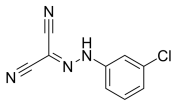


Purity: 99.53%
Clinical Data: No Development Reported
Size: 500 μg, 1 mg, 5 mg, 10 mg, 25 mg

CCCP (Carbonyl cyanide 3-chlorophenylhydrazone; Carbonyl Cyanide m-Chlorophenylhydrazone)

Cat. No.: HY-100941

CCCP is an oxidative phosphorylation (**OXPHOS**) uncoupler. CCCP induces activation of PINK1 leading to Parkin Ser65 phosphorylation.

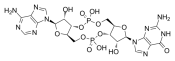


Purity: 99.83%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg, 500 mg

cGAMP

(Cyclic GMP-AMP; 3',3'-cGAMP) Cat. No.: HY-12512

cGAMP (Cyclic GMP-AMPP) functions as an endogenous second messenger in metazoans and triggers interferon production in response to cytosolic DNA.

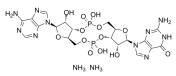


Purity: 99.22%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

cGAMP diammonium

(Cyclic GMP-AMP diammonium; 3',3'-cGAMP diammonium) Cat. No.: HY-110385A

cGAMP (Cyclic GMP-AMPP) diammonium functions as an endogenous second messenger in metazoans and triggers interferon production in response to cytosolic DNA.

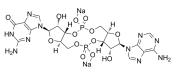


Purity: 95.42%
Clinical Data: No Development Reported
Size: 500 μg, 1 mg, 5 mg, 10 mg, 25 mg

cGAMP disodium

(Cyclic GMP-AMP disodium; 3',3'-cGAMP disodium) Cat. No.: HY-110385

cGAMP (Cyclic GMP-AMPP) disodium functions as an endogenous second messenger in metazoans and triggers interferon production in response to cytosolic DNA.

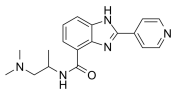


Purity: 99.22%
Clinical Data: No Development Reported
Size: 500 μg, 1 mg, 5 mg, 10 mg, 25 mg

ChX710

Cat. No.: HY-112951

ChX710 could prime the type I interferon response to cytosolic DNA, which induces the ISRE promoter sequence, specific cellular Interferon-Stimulated Genes (ISGs), and the phosphorylation of Interferon Regulatory Factor (IRF) 3.

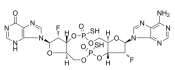


Purity: 99.12%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

CL656

(c-[2'FdAMP(S)-2'FdIMP(S)]) Cat. No.: HY-112878

CL656 is an activator of stimulator of interferon genes (**STING**).

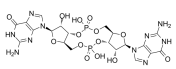


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Cyclic-di-GMP

(c-di-GMP; cyclic diguanylate; 5GP-5GP) Cat. No.: HY-107780

Cyclic-di-GMP (c-di-GMP) is a **STING** activator and a ubiquitous second messenger that regulates biofilm formation, motility, and virulence in diverse bacterial species.

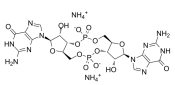


Purity: 98.18%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg

Cyclic-di-GMP diammonium (c-di-GMP diammonium; cyclic diguanylate diammonium; 5GP-5GP diammonium)

Cat. No.: HY-107780B

Cyclic di-GMP (c-di-GMP) diammonium is a **STING** activator and a global bacterial second messenger, which regulates biofilm formation, motility, and virulence in diverse bacterial species.

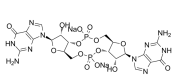


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Cyclic-di-GMP disodium (c-di-GMP disodium; cyclic diguanylate disodium; 5GP-5GP disodium)

Cat. No.: HY-110382

Cyclic di-GMP (c-di-GMP) disodium is a **STING** activator and a global bacterial second messenger, which regulates biofilm formation, motility, and virulence in diverse bacterial species.

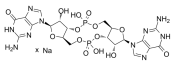


Purity: 98.23%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

Cyclic-di-GMP sodium (c-di-GMP sodium; cyclic diguanylate sodium; 5GP-5GP sodium)

Cat. No.: HY-107780A

Cyclic di-GMP sodium (c-di-GMP sodium) is a **STING** activator and a global bacterial second messenger, which regulates biofilm formation, motility, and virulence in diverse bacterial species.

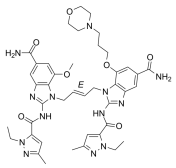


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

diABZI STING agonist-1

Cat. No.: HY-112921A

diABZI STING agonist-1 is a selective stimulator of interferon genes **(STING)** receptor agonist, with EC_{50}s of 130, 186 nM for human and mouse, respectively.

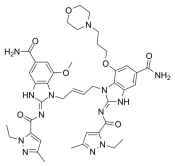


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

diABZI STING agonist-1 (Tautomerism)

Cat. No.: HY-112921

diABZI STING agonist-1 Tautomerism (compound 3) is a selective stimulator of interferon genes **(STING)** receptor agonist, with EC_{50}s of 130, 186 nM for human and mouse, respectively.

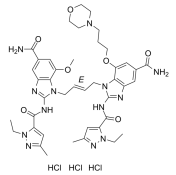


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

diABZI STING agonist-1 trihydrochloride

Cat. No.: HY-112921B

diABZI STING agonist-1 (trihydrochloride) is a selective stimulator of interferon genes **(STING)** receptor agonist, with EC_{50}s of 130, 186 nM for human and mouse, respectively.

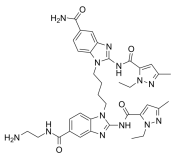


Purity: 99.92%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

diABZI-C2-NH2

Cat. No.: HY-137320

diABZI-C2-NH2, an active analogue containing a primary amine functionality, is a **STING** agonist.

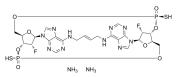


Purity: 96.02%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

E7766 diammonium salt

Cat. No.: HY-111999A

E7766 diammonium salt is a macrocycle-bridged **STING** agonist with a K_d of 40 nM. E7766 diammonium salt shows potent pan-genotypic and antitumor activities.

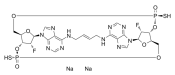


Purity: 99.73%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

E7766 disodium

Cat. No.: HY-111999B

E7766 disodium is a macrocycle-bridged **STING** agonist with a K_d of 40 nM. E7766 disodium shows potent pan-genotypic and antitumor activities.

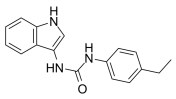


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

H-151

Cat. No.: HY-112693

H-151 is a potent, selective and covalent antagonist of **STING** that has noteworthy inhibitory activity both in cells and in vivo. H-151 reduces TBK1 phosphorylation and suppresses STING palmitoylation. H-151 can be used for the research of autoinflammatory disease.

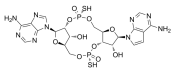


Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

IACS-8779

Cat. No.: HY-130116

IACS-8779 is a highly potent **stimulator of interferon genes (STING)** agonist with robust systemic antitumor efficacy.

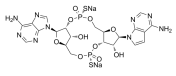


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

IACS-8779 disodium

Cat. No.: HY-130116A

IACS-8779 disodium is a highly potent stimulator of interferon genes (**STING**) agonist with robust systemic antitumor efficacy. IACS-8779 disodium shows robust activation of the STING pathway in vitro and a superior systemic anti-tumor response in the B16 murine model of melanoma.

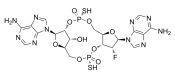


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

IACS-8803

Cat. No.: HY-130115

IACS-8803 is a highly potent cyclic dinucleotide **STING** agonist with robust systemic antitumor efficacy.

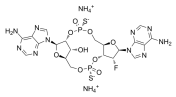


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

IACS-8803 diammonium

Cat. No.: HY-130115B

IACS-8803 diammonium is a highly potent cyclic dinucleotide **STING** agonist. IACS-8803 diammonium has a robust systemic antitumor efficacy.

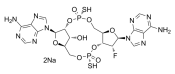


Purity: 99.24%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

IACS-8803 disodium

Cat. No.: HY-130115A

IACS-8803 disodium is a highly potent cyclic dinucleotide **STING** agonist. IACS-8803 disodium has a robust systemic antitumor efficacy.

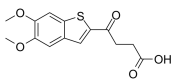


Purity: 99.97%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

MSA-2

Cat. No.: HY-136927

MSA-2, a potent and orally available non-nucleotide **STING** agonist, is bound to STING as a noncovalent dimer with nanomolar affinity. MSA-2 shows **EC_{50}**s of 8.3 and 24 μM for human STING isoforms WT and HAQ, respectively.

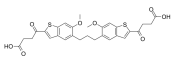


Purity: 98.79%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

MSA-2 dimer

Cat. No.: HY-141514

MSA-2 dimer is a selective, orally active non-nucleotide **STING** agonist (K_d=145 μM) with long-term antitumor and immunogenic activity. MSA-2 dimer is bound to **STING** as a non-covalent dimer exhibiting higher permeability than cyclic dinucleotide.



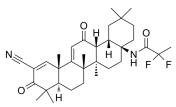
Purity: 99.30%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Omaveloxolone

(RTA 408)

Cat. No.: HY-12212

Omaveloxolone (RTA 408) is an antioxidant inflammation modulator (AIM), which activates **Nrf2** and suppresses nitric oxide (NO). Omaveloxolone attenuates osteoclastogenesis by inhibiting STING dependent NF-κb signaling.

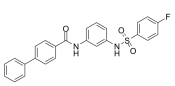


Purity: 99.40%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

SN-008

Cat. No.: HY-145009

SN-008, a less active SN-011 analog, can be used as a negative control.

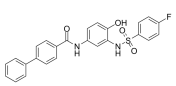


Purity: 98.15%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

SN-011

Cat. No.: HY-145010

SN-011 is a potent and selective mouse and human **STING** inhibitor, with an **IC_{50}** of 76 nM for STING signaling. SN-011 competes with cyclic dinucleotide (CDN) for the binding pocket of the STING dimer, blocking CDN binding and STING activation.

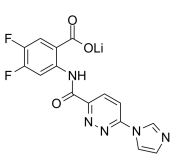


Purity: 98.87%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

SR-717

Cat. No.: HY-131454

SR-717 is a non-nucleotide **STING** agonist with **EC_{50}**s of 2.1 μM and 2.2 μM in ISG-THP1 (WT) and ISG-THP1 cGAS KO (cGAS KO) cell lines, respectively. SR-717 is a stable cyclic guanosine monophosphate-adenosine monophosphate (cGAMP) mimetic. Antitumor activity.

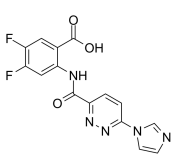


Purity: 99.75%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

SR-717 free acid

Cat. No.: HY-131454A

SR-717 free acid is a non-nucleotide **STING** agonist with **EC_{50}**s of 2.1 μM and 2.2 μM in ISG-THP1 (WT) and ISG-THP1 cGAS KO (cGAS KO) cell lines, respectively. SR-717 free acid is a stable cyclic guanosine monophosphate-adenosine monophosphate (cGAMP) mimetic. Antitumor activity.

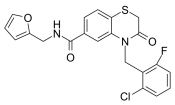


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

STING agonist-1

(G10) Cat. No.: HY-19711

STING agonist-1 (G10) is human-specific **STING** agonist that elicits antiviral activity against emerging Alphaviruses. G10 potently blocks replication of Alphavirus species Venezuelan Equine Encephalitis Virus (VEEV) with IC_{90} of 24.57 μM.

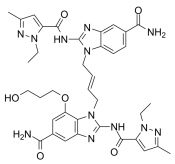


Purity: 99.54%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

STING agonist-3

Cat. No.: HY-103665

STING agonist-3, extracted from patent WO2017175147A1 (example 10), is a selective and non-nucleotide small-molecule **STING** agonist with a pEC_{50} and pIC_{50} of 7.5 and 9.5, respectively.

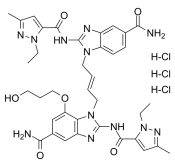


Purity: 99.96%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg

STING agonist-3 trihydrochloride

Cat. No.: HY-103665A

STING agonist-3 trihydrochloride, extracted from patent WO2017175147A1 (example 10), is a selective and non-nucleotide small-molecule **STING** agonist with a pEC_{50} and pEC_{50} of 7.5 and 9.5, respectively.

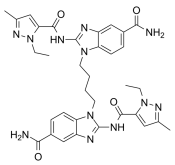


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

STING agonist-4

Cat. No.: HY-123943

STING agonist-4 is an stimulator of Interferon Genes (STING) receptor agonist with an apparent inhibitory constant (IC_{50}) of 20 nM.

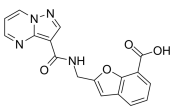


Purity: 99.52%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

STING agonist-7

Cat. No.: HY-143896

STING agonist-7 is a non-nucleotide **STING** agonist. STING agonist-7 binds selectively to mouse STING but not human STING. STING agonist-7 penetrates cell membrane poorly.

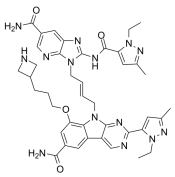


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

STING agonist-8

Cat. No.: HY-144168

STING agonist-8 is a potent **STING** agonist with an EC_{50} of 27 nM in THP1-Dual KI-hSTING-R232 cells (WO2021239068A1, compound 5-AB).

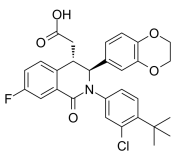


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

STING ligand-1

Cat. No.: HY-114399

STING ligand-1 is a lead **STING** ligand with an IC_{50} of 68 nM for HAQ STING.

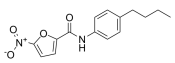


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

STING-IN-2

Cat. No.: HY-138682

STING-IN-2 (C-170) is a potent and covalent **STING** inhibitor. STING-IN-2 efficiently inhibits both **mouse STING (mmSTING)** and **human STING (hsSTING)**. STING-IN-2 can be used for autoinflammatory disease research.

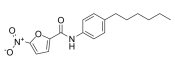


Purity: 98.39%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

STING-IN-3

Cat. No.: HY-138683

STING-IN-3 is an inhibitor of **stimulator of interferon genes (STING)**. STING-IN-3 efficiently inhibits both hsSTING and mmSTING through covalently target the predicted transmembrane cysteine residue 91 and thereby block the activation-induced palmitoylation of STING.

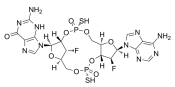


Purity: 99.30%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

Ulevostinag

(MK-1454) Cat. No.: HY-139586

Ulevostinag (MK-1454) is a **STING** agonist.

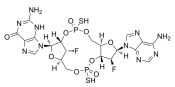


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Ulevostinag (isomer 1)

(MK-1454 (isomer 1)) **Cat. No.:** HY-139586A

Ulevostinag isomer 1 (MK-1454 isomer 1) is the isomer of Ulevostinag. Ulevostinag is a STING agonist.

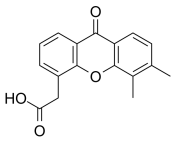


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Vadimezan

(DMXAA; ASA-404) **Cat. No.:** HY-10964

Vadimezan (DMXAA; ASA-404), the tumor vascular disrupting agent (tumor-VDA), is a murine agonist of the **stimulator of interferon genes** (**STING**) and also a potent inducer of **type I IFNs** and other cytokines. Vadimezan has anti-influenza virus **H1N1-PR8** activities.



Purity: 99.81%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg