IFNAR

Interferon-α/β receptor; Interferon-alpha/beta receptor

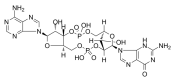
The interferon-α/β receptor (IFNAR) is composed of two subunits, IFNAR1 and IFNAR2, encoding transmembrane polypeptides. Type-I IFNs, interferon α (IFN-α) and interferon β (IFN-β), act through a shared receptor complex, IFNAR. Binding of type-I IFN to IFNAR1 will robustly activate Janus activated kinase-signal transducer and activator of transcription (JAK-STAT) signaling pathway. Aberrant activation of the type-I IFN response results in a spectrum of disorders called interferonopathies.

Type-I IFN response occurs when IFN-α/β binds to their receptor complex, IFNAR. The ligand-receptor complex is phosphorylated, presumably by pre-associated Janus activated kinases (JAKs) namely tyrosine kinase 2 (TYK2) on IFNAR1 and JAK1 on IFNAR2. The phosphorylated receptors are docking sites for signal transducers and activators of transcription (STAT) factors that dimerise and translocate to the nucleus. STATs 1, 2, 3, 4, and 5 are activated by type-I IFNs in many cell types. Other kinases (e.g., mitogen-activated protein kinases) and transcription factors (e.g., nuclear factor-κB) can also be activated in response to type-I IFNs. Multiple pathways and IFN-regulated genes are activated by IFNs, many of which remain unknown.

IFNAR Inhibitors, Agonists, Activators, Modulators & Inducers

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

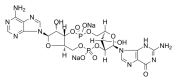
2',3'-cGAMP (2'-3'-cyclic GMP-AMP) is a endogenous cGAMP in mammalian cells. 2',3'-cGAMP binds to **STING** with a high affinity and is a potent inducer of **interferon-β (IFNβ)**. 2',3'-cGAMP is produced in mammalian cells in response to DNA in the cytoplasm.



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

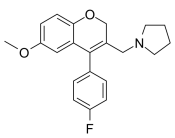
2',3'-cGAMP sodium (2'-3'-cyclic GMP-AMP sodium) is a endogenous cGAMP in mammalian cells. 2',3'-cGAMP sodium binds to **STING** with a high affinity and is a potent inducer of **interferon-β (IFNβ)**. 2',3'-cGAMP sodium is produced in mammalian cells in response to DNA in the cytoplasm.



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

AX-024
Cat. No.: HY-107390

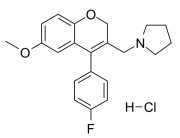
AX-024 is an orally available, first-in-class inhibitor of the **TCR-Nck** interaction that selectively inhibits TCR-triggered T cell activation with an IC_{50} ~1 nM. AX-024 modulates cell signaling by targeting **SH3** domains.



Purity: ≥98.0%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

AX-024 hydrochloride
Cat. No.: HY-107390A

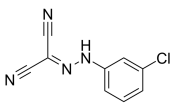
AX-024 hydrochloride is an orally available, first-in-class inhibitor of the **TCR-Nck** interaction that selectively inhibits TCR-triggered T cell activation with an IC_{50} ~1 nM. AX-024 hydrochloride modulates cell signaling by targeting **SH3** domains.



Purity: 99.12%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

CCCP (Carbonyl cyanide 3-chlorophenylhydrazone; Carbonyl Cyanide m-Chlorophenylhydrazone)
Cat. No.: HY-100941

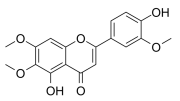
CCCP is an oxidative phosphorylation (**OXPHOS**) uncoupler. CCCP induces activation of PINK1 leading to Parkin Ser65 phosphorylation.



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

Cirsilineol
Cat. No.: HY-119347

Cirsilineol, a natural flavone compound, selectively inhibits IFN-γ/STAT1/T-bet signaling in intestinal $CD4^+$ T cells. Cirsilineol has potent immunosuppressive and anti-tumor properties.



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

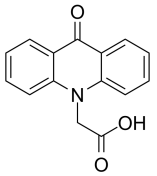
CP-28888
(CP 28888-27) Cat. No.: HY-U00008

CP-28888 is an interferon inducer, more potent in mice, but is less active in man and devoid of antirhinovirus effects.

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

Cridanimod
Cat. No.: HY-W011890

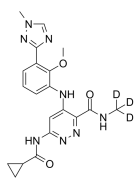
Cridanimod is a potent **progesterone receptor (PR)** activator mediated through induction of **IFNα** and **IFNβ** expression. Cridanimod is a small-molecule immunomodulator and interferon inducer.



Purity: 99.97%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Deucravacitinib
(BMS-986165) Cat. No.: HY-117287

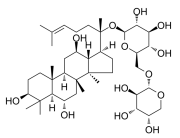
Deucravacitinib (BMS-986165) is a highly selective, orally bioavailable allosteric **TYK2** inhibitor for the treatment of autoimmune diseases, which selectively binds to TYK2 pseudokinase (JH2) domain (IC_{50}=1.0 nM) and blocks receptor-mediated Tyk2 activation by...



Purity: 99.79%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

Ginsenoside F3
Cat. No.: HY-N0600

Ginsenoside F3, a component of PPTGs (an minor saponin in the leaves of Panax ginseng), has immunoenhancing activity by regulating production and gene expression of type 1 cytokines (IL-2, IFN-gamma) and type 2 cytokines (IL-4 and IL-10).

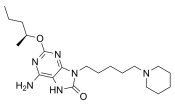


Purity: 99.84%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg

GSK2245035

Cat. No.: HY-118250

GSK2245035 is a highly potent and selective intranasal **Toll-Like receptor 7 (TLR7)** agonist with preferential Type-1 interferon (IFN)-stimulating properties. GSK2245035 has **pEC_{50}**s of 9.3 and 6.5 for IFNα and TFNα.

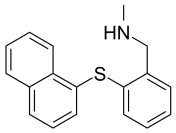


Purity: 99.79%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

IFN alpha-IFNAR-IN-1

Cat. No.: HY-12836

IFN alpha-IFNAR-IN-1 is a nonpeptidic, low-molecular-weight inhibitor of the interaction between IFN-α and IFNAR; inhibit MVA-induced IFN-α responses by BM-pDCs (IC50=2-8 uM).

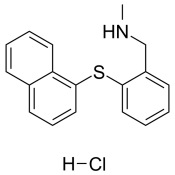


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

IFN alpha-IFNAR-IN-1 hydrochloride

Cat. No.: HY-12836A

IFN alpha-IFNAR-IN-1 hydrochloride is a nonpeptidic, low-molecular-weight inhibitor of the interaction between IFN-α and IFNAR; inhibit MVA-induced IFN-α responses by BM-pDCs (IC50=2-8 uM).



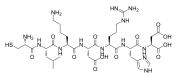
Purity: 99.76%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

IFN-α Receptor Recognition Peptide 1

(IRRP1)

Cat. No.: HY-P1758

IFN-α Receptor Recognition Peptide 1 is a peptide of IFN-α associated with receptor interactions.

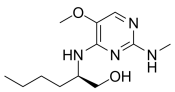


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Interferon receptor inducer-1

Cat. No.: HY-112189

Interferon receptor inducer-1 (compound 6) is an interferon **(IFN)** receptor inducer. Used accordingly in the treatment of a disorder in which the induction of interferon is involved.



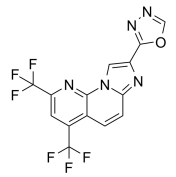
Purity: 99.15%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

RO8191

(CDM-3008; RO4948191)

Cat. No.: HY-W063968

RO8191 (CDM-3008), an imidazonaphthyridine compound, is an orally active and potent **interferon (IFN) receptor** agonist. RO8191 directly binds to IFNα/β receptor 2 (IFNAR2) and activates IFN-stimulated genes (ISGs) expression and **JAK/STAT** phosphorylation.

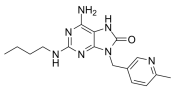


Purity: 98.53%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

SM-276001

Cat. No.: HY-123291

SM-276001 is a potent selective **TLR7** agonist that can induce antitumor immune responses. SM-276001 is an orally active **interferon** (**IFN**) inducer.



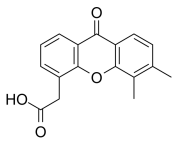
Purity: 99.71%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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