NOD-like Receptor (NLR)

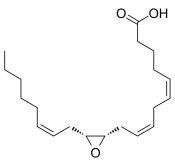
Nucleotide oligomerization domain (NOD)-like receptors (NLRs) are critical cytoplasmic pattern-recognition receptors (PRRs) that play an important role in the host innate immune response and immunity homeostasis. There are 23 NLR family members in humans and at least 34 NLR genes in mice. NLRs are expressed in many cell types including immune cells and epithelial cells, although certain NLR family members are expressed primarily in phagocytes including macrophages and neutrophils. The NLR family are most commonly classified according to their N-terminal domain, falling into one of four subfamilies; NLRA, NLRB, NLRC and NLRP.

The NLRs recognize various ligands from microbial pathogens (peptidoglycan, flagellin, viral RNA, fungal hyphae, etc.), host cells (ATPs, cholesterol crystals, uric acid, etc.), and environmental sources (alum, asbestos, silica, alloy particles, UV radiation, skin irritants, etc.). Most NLRs act as PRRs, recognizing the above ligands and activate inflammatory responses. However, some NLRs may not act as PRRs but instead respond to cytokines such as interferons. The activated NLRs show various functions that can be divided into four broad categories: inflammasome formation, signaling transduction, transcription activation, and autophagy.

(±)11(12)-EET

(11,12-EET) Cat. No.: HY-130494

(±)11(12)-EET is a NLRP3 inflammasome inhibitor. (±)11(12)-EET can be used for the research of anti-inflammatory, angiogenic and cardioprotective.

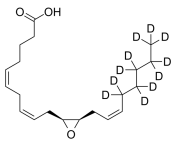


Purity: >98%
Clinical Data: No Development Reported
Size: 25 μg, 50 μg

(±)11(12)-EET-d11

((±)11,12-EET-d11) Cat. No.: HY-130494S

(±)11(12)-EET-d11 ((±)11,12-EET-d11) is the deuterium labeled (±)11(12)-EET. (±)11(12)-EET is a NLRP3 inflammasome inhibitor. (±)11(12)-EET can be used for the research of anti-inflammatory, angiogenic and cardioprotective.

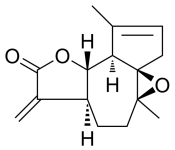


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Arglabin

((+)-Arglabin) Cat. No.: HY-16059

Arglabin ((+)-Arglabin), a natural product isolated from Artemisia glabella, is a **NLRP3 inflammasome** inhibitor. Arglabin shows anti-inflammatory and antitumor activities.

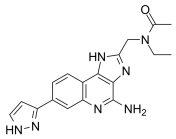


Purity: 99.49%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

BMS-986299

Cat. No.: HY-139396

BMS-986299 (compound 112) is a first-in-class **NLRP3** inflammasome agonist with an EC_{50} of 1.28 μM. (patent WO2018152396A1).

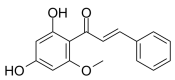


Purity: 99.95%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Cardamonin

(Cardamomin; Alpinetin chalcone) Cat. No.: HY-N0279

Cardamonin (Cardamomin) acts as an **aryl hydrocarbon receptor** (**AhR**) activator. Cardamonin alleviates inflammatory bowel disease by the inhibition of **NLRP3 inflammasome** activation via an AhR/Nrf2/NQO1 pathway.

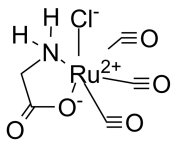


Purity: 98.54%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

CORM-3

Cat. No.: HY-100581

CORM-3, a carbon monoxide-releasing molecule, attenuates **NF-κB p65** nuclear translocation, reduces ROS generation and enhances intracellular glutathione and superoxide dismutase levels. CORM-3 reduces **NLRP3** inflammasome activation.

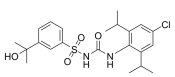


Purity: >98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg

CP-424174

Cat. No.: HY-119721

CP-424174 is a reversible inhibitor against **IL-1β** processing with an IC_{50} of 210 nM.CP-424174 indirectly inhibits NLRP3.

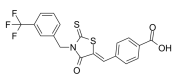


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

CY-09

Cat. No.: HY-103666

CY-09 is a selective and direct **NLRP3** inhibitor. CY-09 directly binds to the ATP-binding motif of NLRP3 NACHT domain and inhibits NLRP3 ATPase activity, resulting in the suppression of **NLRP3 inflammasome** assembly and activation.

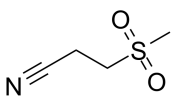


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

Dapansutrile

Cat. No.: HY-17629

Dapansutrile is a potent, selective and orally active inhibitor of **NLRP3 inflammasome**. Anti-inflammatory, analgesic activity.

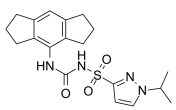


Purity: ≥98.0%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 10 mg

Emlenoflast

(MCC7840) Cat. No.: HY-137245

Emlenoflast (MCC7840), a sulfonylurea, is a potent and selective inhibitor of **NLRP3 inflammasome**, with an IC_{50} of <100 nM. Emlenoflast can be used for the research of inflammatory diseases.



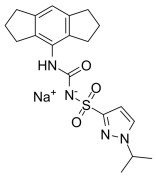
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Emlenoflast sodium

(MCC7840 sodium)

Cat. No.: HY-137245A

Emlenoflast (MCC7840) sodium, a sulfonylurea, is a potent and selective inhibitor of **NLRP3 inflammasome**, with an IC_{50} of <100 nM. Emlenoflast sodium can be used for the research of inflammatory diseases.

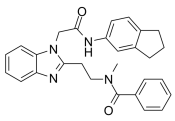


Purity: 98.13%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

GSK717

Cat. No.: HY-136555

GSK717 is a potent, selective **NOD2** (nucleotide-binding oligomerization domain 2) inhibitor. GSK717 inhibits muramyl dipeptide (MDP)-induced NOD2-mediated signaling, with an IC_{50} of 400 nM for MDP-stimulated IL-8 secretion in HEK293/hNOD2 cells.

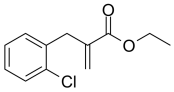


Purity: 99.83%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

INF39

Cat. No.: HY-101868

INF39 is an irreversible and noncytotoxic **NLRP3** inhibitor.

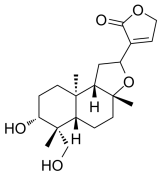


Purity: 99.88%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Isoandrographolide

Cat. No.: HY-N10359

Isoandrographolide possesses cell differentiation inducing and hepatoprotective effect. Isoandrographolide inhibits NLRP3 inflammasome activation and attenuates silicosis in mice.

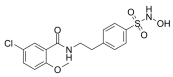


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

JC-171

Cat. No.: HY-117432

JC-171 is a selective **NLRP3** inflammasome inhibitor, with an IC_{50} of 8.45 μM for inhibiting LPS/ATP-induced interleukin-1β (IL-1β) release from J774A.1 macrophages.

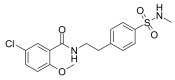


Purity: 99.71%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

JC124

Cat. No.: HY-120007

JC124 is a specific **NLRP3** inflammasome inhibitor. JC124 has anti-inflammatory and neuroprotective effects.

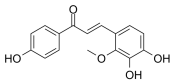


Purity: 97.13%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Licochalcone B

Cat. No.: HY-N0373

Licochalcone B is an extract from the root of Glycyrrhiza inflate.



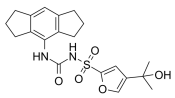
Purity: 99.93%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg

MCC950

(CP-456773; CRID3)

Cat. No.: HY-12815

MCC950 (CP-456773; CRID3) is a potent and selective **NLRP3** inhibitor with IC_{50}s of 7.5 and 8.1 nM in BMDMs and HMDMs, respectively.



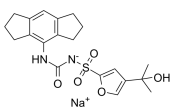
Purity: 99.43%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

MCC950 sodium

(CP-456773 sodium; CRID3 sodium salt)

Cat. No.: HY-12815A

MCC950 sodium (CP-456773 sodium; CRID3 sodium salt) is a potent, selective **NLRP3** inhibitor with IC_{50}s of 7.5 and 8.1 nM in BMDMs and HMDMs, respectively.



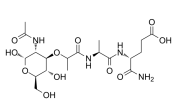
Purity: 99.61%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Muramyl dipeptide

(MDP)

Cat. No.: HY-127090

Muramyl dipeptide (MDP) is a synthetic **immunoreactive peptide**, consisting of N-acetyl muramic acid attached to a short amino acid chain of L-Ala-D-isoGln. Muramyl dipeptide is an inducer of **bone formation** through induction of **Runx2**.

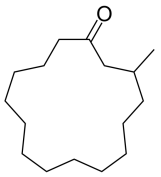


Purity: ≥98.0%
Clinical Data: Phase 4
Size: 1 mg, 5 mg, 10 mg, 25 mg

Muscone

Cat. No.: HY-N0633

Muscone is the main active monomer of traditional Chinese medicine musk. Muscone inhibits **NF-κB** and **NLRP3** inflammasome activation. Muscone remarkably decreases the levels of inflammatory cytokines (**IL-1β**, **TNF-α** and **IL-6**), and ultimately improves cardiac function and survival rate.

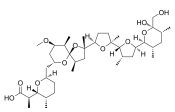


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 25 mg, 50 mg, 100 mg

Nigericin

Cat. No.: HY-127019

Nigericin is an **antibiotic** derived from Streptomyces hygroscopicus that act as a **K^+/H^+ ionophore**, promoting K^+/H^+ exchange across mitochondrial membranes.Nigericin can be a **NLRP3** activator that induces the release of IL-1β as a NALP3-dependent manner.

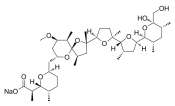


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Nigericin sodium salt

Cat. No.: HY-100381

Nigericin sodium salt is an antibiotic from Streptomyces hygroscopicus that works by acting as an H^+, K^+, and Pb^{2+} ionophore, a **NLRP3** activator.

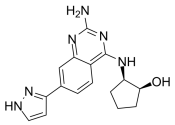


Purity: ≥95.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

NLRP3 antagonist 1

Cat. No.: HY-143563

NLRP3 antagonist 1 is a potent antagonist of **NLRP3**. NLRP3 is mainly expressed in macrophages and neutrophils and is involved in the body's intrinsic immunity against pathogenic infections and stress injury.

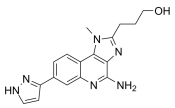


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NLRP3 modulators 1

Cat. No.: HY-103715

NLRP3 modulators 1 is the potent modulator of NLRP3.

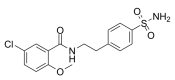


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NLRP3-IN-2

Cat. No.: HY-W011082

NLRP3-IN-2, an intermediate substrate in the synthesis of glyburide, inhibits the formation of the **NLRP3** inflammasome in cardiomyocytes and limits the infarct size following myocardial ischemia/reperfusion in the mouse, without affecting glucose metabolism.

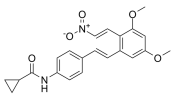


Purity: 98.52%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 50 mg, 100 mg

NLRP3-IN-4

Cat. No.: HY-132892

NLRP3-IN-4 is potent and orally active **NLRP3** inflammasome inhibitor with inflammatory activity for colitis.

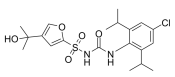


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NLRP3-IN-5

Cat. No.: HY-145087

NLRP3-IN-5 is a **NLRP3 inflammasome** inhibitor (WO2016131098 (N-((4-chloro-2,6-dimethylphenyl)carbamoyl)-4-(2-hydroxypropan-2-l)furan-2-sulfonamide)).

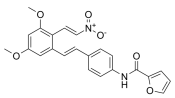


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NLRP3-IN-8

Cat. No.: HY-146594

NLRP3-IN-8 (compound 27) is an orally active, directly binding **NLRP3** inflammasome inhibitor with an IC_{50} value of 1.23 μM against IL-1 β. NLRP3-IN-8 has good metabolic stability to liver microsomes ($t_{1/2}$ = 138.63 min), and has almost no toxicity (against L02: IC_{50} > 100 μM).

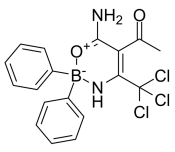


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

NLRP3-IN-NBC6

Cat. No.: HY-131040

NLRP3-IN-NBC6 is a potent, selective **NLRP3 inflammasome** inhibitor (IC_{50}= 574 nM) that acts independently of Ca^{2+}.

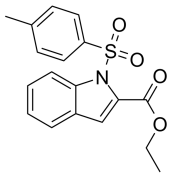


Purity: ≥99.0%
Clinical Data: No Development Reported
Size: 5 mg

NOD-IN-1

Cat. No.: HY-100691

NOD-IN-1 is a potent mixed inhibitor of nucleotide-binding oligomerization domain (**NOD**)-like receptors, **NOD1** and **NOD2**, with IC_{50} of 5.74 μM and 6.45 μM, respectively.

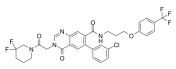


Purity: 99.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

NOD1/2 antagonist-1

Cat. No.: HY-146034

NOD1/2 antagonist-1 (compound 36b) is a potent **NOD1/2** (nucleotide-binding oligomerization domain-like receptor 1/2) dual antagonist, with IC_{50} values of 1.13 (**NOD1**) and 0.77 μM (**NOD2**), respectively. NOD1/2 antagonist-1 has a acceptable $T_{1/2}$ (67.6 min).



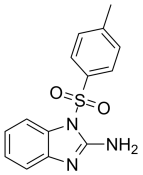
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Nodinitib-1

(ML130; CID-1088438)

Cat. No.: HY-18639

Nodinitib-1 (ML130;CID-1088438) is a **NOD1** inhibitor with an IC_{50} of 0.56 μM.



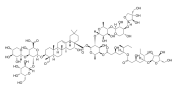
Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

QS-21

(Stimulon)

Cat. No.: HY-101092

QS-21, an immunostimulatory saponin, could be used as a potent vaccine adjuvant. QS-21 stimulates **Th2** humoral and **Th1** cell-mediated immune responses through action on antigen presenting cells (APCs) and T cells.

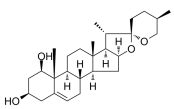


Purity: 97.64%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Ruscogenin

Cat. No.: HY-N0496

Ruscogenin, an important steroid sapogenin derived from Ophiopogon japonicus, attenuates cerebral ischemia-induced blood-brain barrier dysfunction by suppressing TXNIP/NLRP3 inflammasome activation and the MAPK pathway and exerts significant anti-inflammatory and anti-thrombotic activities.

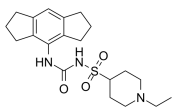


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg

Selnoflast

Cat. No.: HY-132831

Selnoflast (example 6) is a **NLRP3** inhibitor (extracted from patent WO2019008025).

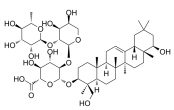


Purity: 98.21%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Soyasaponin II

Cat. No.: HY-122920

Soyasaponin II is a saponin with antiviral activity. Soyasaponin II inhibits the replication of HSV-1, HCMV, influenza virus, and HIV-1. Soyasaponin II shows potent inhibition on HSV-1 replication.



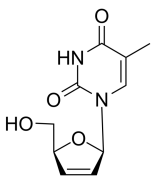
Purity: 99.81%
Clinical Data: No Development Reported
Size: 1 mg

Stavudine

(d4T)

Cat. No.: HY-B0116

Stavudine (d4T) is an orally active **nucleoside reverse transcriptase** inhibitor **(NRTI)**. Stavudine has activity against **HIV-1** and **HIV-2**. Stavudine also inhibits the replication of mitochondrial DNA (mtDNA).



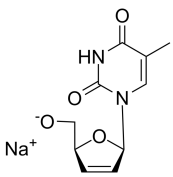
Purity: 99.67%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg, 500 mg

Stavudine sodium

(d4T sodium)

Cat. No.: HY-B0116A

Stavudine (d4T) sodium is an orally active **nucleoside reverse transcriptase** inhibitor **(NRTI)**. Stavudine sodium has activity against **HIV-1** and **HIV-2**. Stavudine sodium also inhibits the replication of mitochondrial DNA (mtDNA).

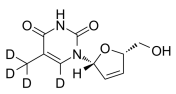


Purity: >98%
Clinical Data: Launched
Size: 1 mg, 5 mg

Stavudine-d4

Cat. No.: HY-B0116S

Stavudine-d4 is the deuterium labeled Stavudine. Stavudine (d4T) is an orally active **nucleoside reverse transcriptase** inhibitor **(NRTI)**. Stavudine has activity against **HIV-1** and **HIV-2**. Stavudine also inhibits the replication of mitochondrial DNA (mtDNA).

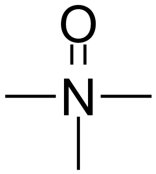


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Trimethylamine N-oxide

Cat. No.: HY-116084

Trimethylamine N-oxide is a gut microbe-dependent metabolite of dietary choline and other trimethylamine-containing nutrients. Trimethylamine N-oxide induces inflammation by activating the **ROS/NLRP3 inflammasome**.

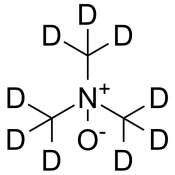


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg

Trimethylamine N-oxide-d9

Cat. No.: HY-116084S

Trimethylamine N-oxide-d9 is the deuterium labeled Trimethylamine N-oxide. Trimethylamine N-oxide is a gut microbe-dependent metabolite of dietary choline and other trimethylamine-containing nutrients.

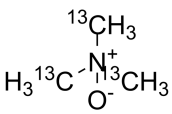


Purity: ≥99.0%
Clinical Data: No Development Reported
Size: 5 mg

Trimethylamine-N-oxide-13C3

Cat. No.: HY-116084S1

Trimethylamine-N-oxide-13C3 is the 13C-labeled Trimethylamine N-oxide. Trimethylamine N-oxide is a gut microbe-dependent metabolite of dietary choline and other trimethylamine-containing nutrients.



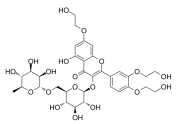
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Troxerutin

(Trihydroxyethylrutin)

Cat. No.: HY-N0139

Troxerutin, also known as vitamin P4, is a tri-hydroxyethylated derivative of natural bioflavonoid rutins which can inhibit the production of **reactive oxygen species** (**ROS**) and depress ER stress-mediated **NOD** activation.

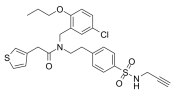


Purity: ≥98.0%
Clinical Data: Launched
Size: 10 mM × 1 mL, 100 mg, 5 g

YQ128

Cat. No.: HY-130252

YQ128 is a potent and selective second-generation **NLRP3 (NOD-like receptor P3) inflammasome** inhibitor with an IC_{50} of 0.30 μM. YQ128 significantly and selectively suppresses the production of **IL-1β**, but not TNF-α, and it can cross the BBB to reach the CNS.



Purity: 99.65%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg