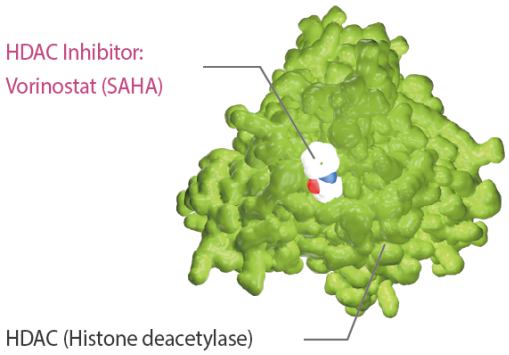
IRAK

Interleukin-1 receptor associated kinase;IL-1R associated kinase



Interleukin-1 receptor-associated kinase (IRAK) is first described as a signal transducer for the proinflammatory cytokine IL-1 and is later implicated in signal transduction of other members of the Toll-like receptor (TLR)/IL-1R family. Four different IRAK-like molecules have been identified: two active kinases, IRAK-1 and IRAK-4, and two inactive kinases, IRAK-2 and IRAK-M. All IRAKs mediate activation of NF-κB and MAPK pathways. IRAKs are protein kinases involved in signalling innate immune responses from TLRs. After TLR-4 and TLR-2 recognize pathogen-associated molecular patterns, such as LPS and peptidoglycan, all IRAK members form multimeric receptor complexes.

IRAKs are essential signaling intermediates in the TLR/IL-1R pathway to both IKK and MAPKs activation. These two pathways are central to the activation of several transcription factors, including NF-κB and AP-1, which contribute to the establishment of an immune response.

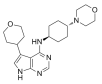
IRAK Inhibitors & Modulators

AZ1495

Cat. No.: HY-111101

Bioactivity: AZ1495 (compound 28) is an oral active inhibitor of Interleukin-1 receptor associated kinase 4 **(IRAK4)**, with **IC_{50}** values of 5 nM and 23 nM for IRAK4 and IRAK1, respectively. Shows activity in treatment of mutant MYD88 ^{L265P} diff...

Purity: 99.83%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

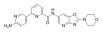


CA-4948

Cat. No.: HY-109585

Bioactivity: CA-4948 is a selective and potent **IRAK4** inhibitor.

Purity: 98.44%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg



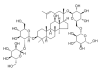
Ginsenoside Rb1

(Gypenoside III)

Cat. No.: HY-N0039

Bioactivity: Ginsenoside Rb1, a main constituent of the root of Panax ginseng, inhibits **Na^+, K^+-ATPase** activity with an **IC_{50}** of 6.3±1.0 μM. Ginsenoside also inhibits **IRAK-1** activation and phosphorylation of **NF-κB p65** .

Purity: 98.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg

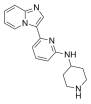


IRAK inhibitor 1

Cat. No.: HY-13275

Bioactivity: IRAK inhibitor 1 is a potent **IRAK-4** inhibitor with **IC_{50}** of 216 nM, is poorly active against JNK-1 and JNK-2 with **IC_{50}** of 3.801 μM, and >10 μM, respectively.

Purity: 99.47%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

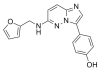


IRAK inhibitor 2

Cat. No.: HY-13276

Bioactivity: IRAK inhibitor 2 is interleukin-1 receptor associated kinase inhibitor .

Purity: 97.23%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

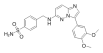


IRAK inhibitor 3

Cat. No.: HY-13277

Bioactivity: IRAK inhibitor 3 is an interleukin-1 (IL-I) receptor-associated kinase (**IRAK**) kinase modulator extracted from patent WO2008030579 A2.

Purity: 96.20%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg

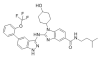


IRAK inhibitor 4

Cat. No.: HY-13278

Bioactivity: IRAK inhibitor 4 is an interleukin-1 receptor associated kinase 4(**IRAK4**) inhibitor.

Purity: 99.24%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg

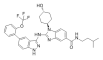


IRAK inhibitor 4 trans

Cat. No.: HY-13278A

Bioactivity: IRAK inhibitor 4 (trans) is the trans form of IRAK inhibitor 4. IRAK inhibitor 4 is an interleukin-1 receptor associated kinase 4 (**IRAK4**) inhibitor.

Purity: 99.50%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg

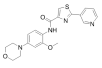


IRAK inhibitor 6

Cat. No.: HY-13280

Bioactivity: IRAK inhibitor 6 is an inhibitor of **interleukin-1 receptor associated kinase 4 (IRAK-4)** with **IC_{50}** of 160 nM.

Purity: 99.75%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg



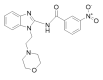
IRAK-1-4 Inhibitor I

(IRAK-1/4 Inhibitor I)

Cat. No.: HY-13329

Bioactivity: IRAK-1-4 Inhibitor I is an inhibitor of interleukin-1 receptor-associated kinase 1/4 (**IRAK 1/4**) with **IC_{50}**s of 0.2 μM and 0.3 μM, respectively.

Purity: 98.49%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

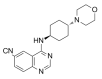


IRAK4-IN-1

Cat. No.: HY-101922

Bioactivity: IRAK4-IN-1 is an interleukin-1 receptor associated kinase 4 (**IRAK4**) inhibitor with an **IC_{50}** of 7 nM.

Purity: 99.01%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO,
1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg



PF06650833

Cat. No.: HY-19836

Bioactivity: PF06650833 is an inhibitor of **Interleukin-1 receptor associated kinase 4 (IRAK4)**, and used to treat diseases such as rheumatoid arthritis, lupus, and lymphomas.

Purity: 98.68%
Clinical Data: Phase 2
Size: 10mM x 1mL in DMSO,
5 mg, 10 mg, 50 mg, 100 mg