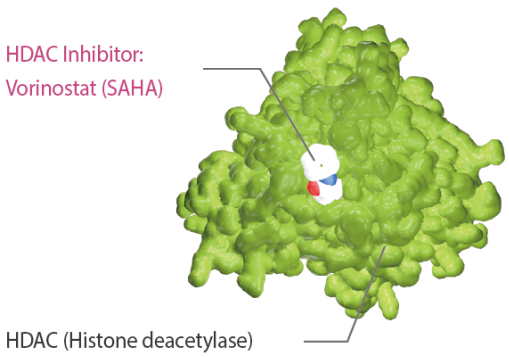
IRE1

Inositol requiring enzyme 1



The serine/threonine-protein kinase/endoribonuclease inositol-requiring enzyme 1 (IRE1) is an enzyme that in humans is encoded by the ERN1 gene. IRE1 is an endoplasmic reticulum (ER) transmembrane sensor that activates UPR to maintain ER and cellular function. While mammalian IRE1 promotes cell survive, it can initiate apoptosis via decay of anti-apoptotic microRNAs.

IRE1 activation is initiated by homotypic interactions of the stress-sensing lumenal domain favoring transautophosphorylation of the kinase-extension nuclease (KEN) domain on the cytoplasmic side of the ER membrane.

IRE1/XBP-1 has been shown to regulate a variety of genes in various cell types in response to ER stress, mostly related to ER function and the secretory pathway, although the target genes vary depending on the cell type and nature of the stress stimuli.

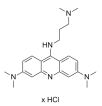
IRE1 Inhibitors & Modulators

3,6-DMAD hydrochloride

Cat. No.: HY-U00460

Bioactivity: 3,6-DMAD hydrochloride is a inhibitor of the **IRE1α-XBP1** pathway of the unfolded protein response.

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



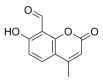
4μ8C

(IRE1 Inhibitor III)

Cat. No.: HY-19707

Bioactivity: 4μ8C (IRE1 Inhibitor III) is a small-molecule inhibitor of **IRE1α**.

Purity: 98.52%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg



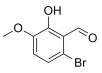
6-Bromo-2-hydroxy-3-methoxybenzaldehyde

(NSC95682)

Cat. No.: HY-107371

Bioactivity: 6-Bromo-2-hydroxy-3-methoxybenzaldehyde (NSC95682) is an **IRE-1α** inhibitor with an **IC_{50}** of 0.08 μM, extracted from patent WO 2008154484 A1, IRE-Iα inhibitor compound 3-5.

Purity: 99.87%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 50 mg

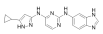


APY29

Cat. No.: HY-17537

Bioactivity: APY29 is an allosteric modulator of **IRE1α** which inhibits IRE1α autophosphorylation with **IC_{50}** of 280 nM and activates IRE1α RNase activity.

Purity: 99.54%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 10 mg, 50 mg

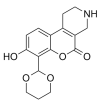


B I09

Cat. No.: HY-107400

Bioactivity: B I09 is an **IRE-1** RNase inhibitor, with an **IC_{50}** of 1230 nM.

Purity: >98%
Clinical Data: No Development Reported
Size: 500 mg, 250 mg

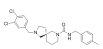


GSK2850163

Cat. No.: HY-U00459

Bioactivity: GSK2850163 is a novel inhibitor of inositol-requiring enzyme-1 alpha (**IRE1α**) which can inhibit **IRE1α kinase activity** and **RNase activity** with **IC_{50}**s of 20 and 200 nM, respectively.

Purity: 98.50%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg

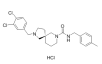


GSK2850163 hydrochloride

Cat. No.: HY-U00459B

Bioactivity: GSK2850163 hydrochloride is a novel inhibitor of inositol-requiring enzyme-1 alpha (**IRE1α**) which can inhibit **IRE1α kinase activity** and **RNase activity** with **IC_{50}**s of 20 and 200 nM, respectively.

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

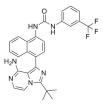


KIRA6

Cat. No.: HY-19708

Bioactivity: KIRA6 allosterically inhibits **IRE1α RNase kinase** activity with an **IC_{50}** of 0.6 μM.

Purity: 98.75%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

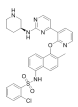


Kira8

Cat. No.: HY-114368

Bioactivity: Kira8 is a mono-selective **IRE1α** inhibitor that allosterically attenuates **IRE1α RNase activity** with an **IC_{50}** of 5.9 nM [1].

Purity: >98%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

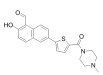


MKC3946

Cat. No.: HY-19710

Bioactivity: MKC3946 is a potent and soluble **IRE1α** inhibitor, used for cancer research.

Purity: 99.77%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

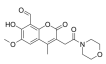


MKC8866

Cat. No.: HY-104040

Bioactivity: MKC8866 is an **IRE1 RNase** inhibitor with an $\mathbf{IC_{50}}$ of less than 0.1 μM for IRE1α RNase.

Purity: 98.38%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO,
5 mg, 10 mg, 25 mg, 50 mg, 100 mg

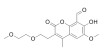


MKC9989

Cat. No.: HY-12399

Bioactivity: MKC9989 is a **Hydroxy aryl aldehydes** (**HAA**) inhibitor and also inhibits **IRE1α** with an $\mathbf{IC_{50}}$ of 0.23 to 44 μM.

Purity: 98.61%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO,
1 mg, 5 mg, 10 mg, 50 mg, 100 mg



STF-083010

Cat. No.: HY-15845

Bioactivity: STF-083010 is an **Ire1** inhibitor. STF-083010 inhibits Ire1 endonuclease activity, without affecting its kinase activity, after endoplasmic reticulum stress.

Purity: 98.0%
Clinical Data: No Development Reported
Size: 10mM x 1mL in DMSO,
5 mg, 10 mg, 50 mg, 100 mg, 200 mg