Eukaryotic Initiation Factor (eIF)

Eukaryotic initiation factors (eIFs) are proteins involved in the initiation phase of eukaryotic translation. These proteins help stabilize the formation of the functional ribosome around the start codon and also provide regulatory mechanisms in translation initiation.

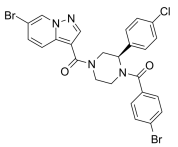
Eukaryotic initiation factor 2B (eIF2B) is a guanine nucleotide-exchange factor which mediates the exchange of GDP (bound to initiation factor eIF2) for GTP, thus regenerating the active [eIF2.GTP] complex that is required for peptide-chain initiation. The activity of eIF2B is a key control point for eukaryotic protein synthesis and is altered in response to viral infection, hormones, nutrients, growth factors and certain stresses.

Eukaryotic translation initiation factor 4E (eIF4E) is best known for its function in the initiation of protein synthesis on capped mRNAs in the cytoplasm. Eukaryotic initiation factor (eIF) 4A functions as a subunit of the initiation factor complex eIF4F, which mediates the binding of mRNA to the ribosome.

(R)-eIF4A3-IN-2

Cat. No.: HY-43913

(R)-eIF4A3-IN-2 is a less active enantiomer of eIF4A3-IN-2. eIF4A3-IN-2 is a highly selective and noncompetitive eukaryotic initiation factor 4A-3 **(eIF4A3)** inhibitor with an IC_{50} of 110 nM.

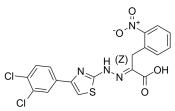


Purity: ≥95.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

(Z)-4EGI-1

Cat. No.: HY-19831A

(Z)-4EGI-1 is the Z-isomer of 4EGI-1 and is an inhibitor of **eIF4E/eIF4G interaction** and of **translation initiation**. (Z)-4EGI-1 effectively binds to **eIF4E** with an IC_{50} of 43.5 μM and a K_d value of 8.74 μM. (Z)-4EGI-1 has anticancer activity.

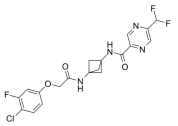


Purity: 98.01%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 250 mg

2BAct

Cat. No.: HY-125021

2BAct is a highly selective, and orally active **eIF2B** (eukaryotic initiation factor 2B) activator with an EC_{50} of 33 nM. 2BAct prevents neurological defects caused by a chronic integrated stress response. 2BAct is able to penetrate the central nervous system (CNS).

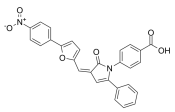


Purity: 98.70%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

4E1RCat

Cat. No.: HY-14427

4E1RCat is an inhibitor of cap-dependent translation, and inhibits **eIF4E:eIF4GI** interaction, with an IC_{50} an of 4 μM.

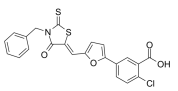


Purity: 99.10%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

4E2RCat

Cat. No.: HY-100733

4E2RCat is an inhibitor of **eIF4E-eIF4G** interaction with an IC_{50} of 13.5 μM.

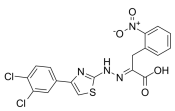


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

4EGI-1

Cat. No.: HY-19831

4EGI-1 is an inhibitor of **eIF4E/eIF4G** interaction, with a K_d of 25 μM against eIF4E binding.

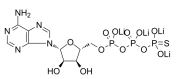


Purity: 98.83%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

ATPγS tetralithium salt (Adenosine-5'-O-3-thiotriphosphate (tetralithium salt); ...)

Cat. No.: HY-108666

ATPγS (tetralithium salt) is a substrate for the nucleotide hydrolysis and RNA unwinding activities of eukaryotic translation initiation factor eIF4A.

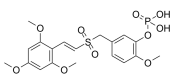


Purity: ≥97.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Briciclib (ON 014185)

Cat. No.: HY-16366

Briciclib (ON 014185) is a derivative of ON 013100, and has the potential in targeting **eIF4E** for solid cancers.

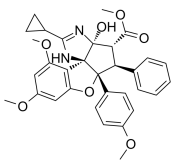


Purity: 99.65%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg

CMLD012072

Cat. No.: HY-129768

CMLD012072 is an amidino-rocaglates and is a potent **eukaryotic initiation factor 4A (eIF4A)** inhibitor. CMLD012072 can induce RNA clamping of **eIF4A1** and **eIF4A2** and possess potent anti-neoplastic activity.

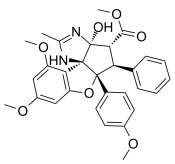


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

CMLD012073

Cat. No.: HY-129769

CMLD012073 is an amidino-rocaglates and is a potent **eukaryotic initiation factor 4A (eIF4A)** inhibitor. CMLD012073 inhibits the growth of NIH/3T3 cells with an IC_{50} of 10 nM. CMLD012073 inhibits eukaryotic translation initiation by modifying the behavior of the RNA helicase (**eIF4A**).

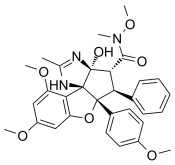


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

CMLD012612

Cat. No.: HY-129767

CMLD012612 is an amidino-rocaglate containing a hydroxamate group and is a potent **eukaryotic initiation factor 4A (eIF4A)** inhibitor. CMLD012612 inhibits cell translation and is cytotoxic to NIH/3T3 cells with an IC_{50} value of 2 nM.

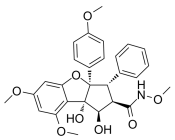


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg

CR-1-31-B

Cat. No.: HY-136453

CR-1-31-B is a synthetic rocaglate and a potent **eIF4A** inhibitor. CR-1-31-B exhibits powerful inhibitory effects over eIF4A by perturbing the interaction between eIF4A and RNA, sequentially impeding initiation during protein synthesis.

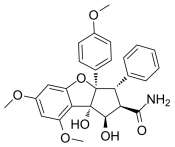


Purity: 98.23%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

Didesmethylrocaglamide

Cat. No.: HY-19356A

Didesmethylrocaglamide, a derivative of Rocaglamide, is a potent **eukaryotic initiation factor 4A (eIF4A)** inhibitor. Didesmethylrocaglamide has potent growth-inhibitory activity with an IC_{50} of 5 nM.

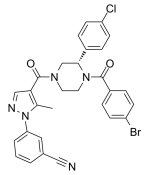


Purity: 98.40%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

eIF4A3-IN-1

Cat. No.: HY-101513

eIF4A3-IN-1 (compound 53a) is a selective **eukaryotic initiation factor 4A3 (eIF4A3)** inhibitor (IC_{50}=0.26 μM; K_d=0.043 μM), which binds to a non-ATP binding site of eIF4A3 and shows significant cellular nonsense-mediated RNA decay (NMD) inhibition at 10 and 3 μM and can be as...

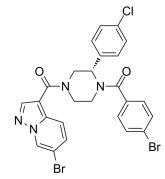


Purity: 99.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

eIF4A3-IN-2

Cat. No.: HY-101785

eIF4A3-IN-2 is a highly selective and noncompetitive **eukaryotic initiation factor 4A-3 (eIF4A3)** inhibitor with an IC_{50} of 110 nM.

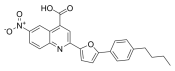


Purity: 99.77%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

eIF4A3-IN-4

Cat. No.: HY-139872

eIF4A3-IN-4 is a novel **eIF4A** inhibitor with an IC_{50} value of 8.6 μM.

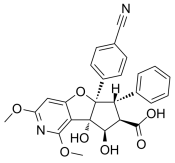


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

eIF4A3-IN-5

Cat. No.: HY-145359

eIF4A3-IN-5 is a potent inhibitor of **eukaryotic initiation factor 4A** (**eIF4A**), such as **eIF4AI** and **eIF4AII**. eIF4A3-IN-5 has the potential for the research of **eIF4A** dependent diseases, including the research of cancer (extracted from patent US20170145026A1).

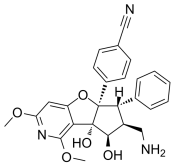


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

eIF4A3-IN-6

Cat. No.: HY-145360

eIF4A3-IN-6 is a potent inhibitor of **eukaryotic initiation factor 4A** (**eIF4A**), such as **eIF4AI** and **eIF4AII**. eIF4A3-IN-6 has the potential for the research of **eIF4A** dependent diseases, including the research of cancer (extracted from patent US20170145026A1).

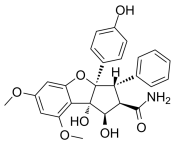


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

eIF4A3-IN-7

Cat. No.: HY-145361

eIF4A3-IN-7 is a potent inhibitor of **eIF4A3**. eIF4A3-IN-7 has the potential for researching cancer and other dysproliferative diseases (extracted from patent WO2019161345A1, Compound 8).

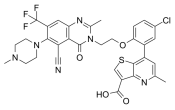


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

eIF4E-IN-1

Cat. No.: HY-145240

eIF4E-IN-1 is a potent inhibitor of **eIF4E**.

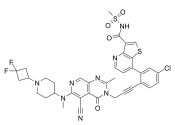


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

eIF4E-IN-2

Cat. No.: HY-145262

eIF4E-IN-2 is a potent inhibitor of **eukaryotic initiation factor 4e** (**eIF4e**). eIF4E-IN-2 has the potential for researching **eIF4e** dependent diseases, including the research of cancer (extracted from patent WO2021003157A1, compound 1188).

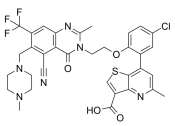


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

eIF4E-IN-3

Cat. No.: HY-145309

eIF4E-IN-3 is a potent inhibitor of **eukaryotic initiation factor 4e** (**eIF4e**). eIF4E-IN-3 has the potential for researching **eIF4e** dependent diseases, including the research of cancer (extracted from patent WO2021003157A1, compound 485).

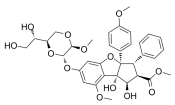


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Episilvestrol

Cat. No.: HY-15359

Episilvestrol is a derivative of silvestrol, isolated from the fruits and twigs of Aglaia silvestris, and is a specific **eIF4A**-targeting translation inhibitor, with antitumor activity.



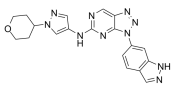
Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg

GCN2-IN-1

(A-92)

Cat. No.: HY-100877

GCN2-IN-1 (A-92) is a potent general control nonderepressible 2 kinase (**GCN2**) inhibitor with an IC_{50} of <0.3 μM in the enzyme assay and an IC_{50} of 0.3-3 μM in the cell assay.

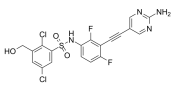


Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

GCN2-IN-6

Cat. No.: HY-130240

GCN2-IN-6 (Compound 6d) is a potent, and orally available **GCN2** inhibitor confirmed by in-house enzymatic (IC_{50} of 1.8 nM) and cellular assays (IC_{50} of 9.3 nM). GCN2-IN-6 is also a eIF2α kinase **PERK** inhibitor with an IC_{50} of 0.26 nM (in enzymatic assay) and 230 nM (in cells).

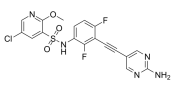


Purity: 99.03%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

GCN2iB

Cat. No.: HY-112654

GCN2iB is an ATP-competitive inhibitor of a serine/threonine-protein kinase **general control nonderepressible 2 (GCN2)**, with an IC_{50} of 2.4 nM.

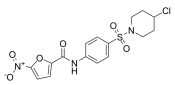


Purity: 99.81%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

ML291

Cat. No.: HY-101991

ML291 is a UPR (unfolded protein response)-inducing sulfonamidebenzamide. ML291 overwhelms the adaptive capacity of the UPR and induces **apoptosis** in a variety of solid cancer models.



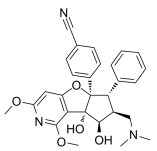
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

rel-Zotatifin

(rel-eFT226)

Cat. No.: HY-112163A

rel-Zotatifin is the racemic isomer of Zotatifin, acts as an eIF4A inhibitor with activity less than Zotatifin. Zotatifin (eFT226) is a potent, selective, and well-tolerated **eIF4A** inhibitor.



Relative stereochemistry

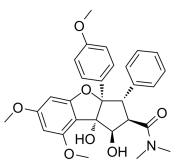
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Rocaglamide

(Roc-A)

Cat. No.: HY-19356

Rocaglamide (Roc-A) is isolated from the genus Aglaia and can be used for coughs, injuries, asthma and inflammatory skin diseases. Rocaglamide is a potent inhibitor of **NF-κB** activation in T-cells.



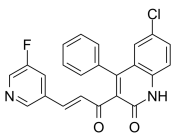
Purity: 99.34%
Clinical Data: No Development Reported
Size: 500 μg, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

SBI-0640756

(SBI-756)

Cat. No.: HY-19560

SBI-0640756 (SBI-756) is an inhibitor of **eIF4G1** and disrupts the eIF4F complex.

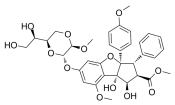


Purity: 99.76%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg, 50 mg

Silvestrol

((-)-Silvestrol) **Cat. No.:** HY-13251

Silvestrol is a eukaryotic translation initiation factor 4A (**eIF4A**) inhibitor isolated from the fruits and twigs of Aglaia foveolata. Silvestrol induces **autophagy** and caspase-mediated **apoptosis**.

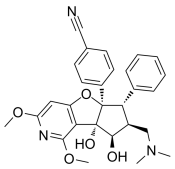


Purity: 98.11%
Clinical Data: No Development Reported
Size: 1 mg, 2 mg, 5 mg, 10 mg

Zotatifin

(eFT226) **Cat. No.:** HY-112163

Zotatifin (eFT226) is a potent, selective, and well-tolerated **eIF4A** inhibitor. Zotatifin promotes eIF4A binding to specific mRNA sequences with recognition motifs in the 5′-UTRs (IC_{50}=2 nM) and interferes with the assembly of the eIF4F initiation complex.



Purity: 99.58%
Clinical Data: Phase 2
Size: 1 mg, 2 mg, 5 mg