mTOR (mammalian target of Rapamycin) is a protein that in humans is encoded by the mTOR gene. mTOR is a serine/threonine protein kinase that regulates cell growth, cell proliferation, cell motility, cell survival, protein synthesis, and transcription. mTOR belongs to the phosphatidylinositol 3-kinase-related kinase protein family. mTOR integrates the input from upstream pathways, including growth factors and amino acids. mTOR also senses cellular nutrient, oxygen, and energy levels. The mTOR pathway is dysregulated in human diseases, such as diabetes, obesity, depression, and certain cancers. Rapamycin inhibits mTOR by associating with its intracellular receptor FKBP12. The FKBP12-rapamycin complex binds directly to the FKBP12-Rapamycin Binding (FRB) domain of mTOR, inhibiting its activity.
mTOR Inhibitors, Antagonists, Activators & Modulators

(+)-Usnic acid
Cat. No.: HY-N0656A
(+)-Usnic acid is isolated from isolated from lichens, binds at the ATP-binding pocket of mTOR, and inhibits mTORC1/2 activity.
Purity: ≥99.0%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

3BDO
Cat. No.: HY-U00434
3BDO is a new mTOR activator which can also inhibit autophagy.
Purity: 99.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg

Apitolisib
(GDC-0980; GNE 390; RG 7422)
Cat. No.: HY-13246
Apitolisib (GDC-0980; GNE 390; RG 7422) is a selective, potent, orally bioavailable Class I PI3 kinase and mTOR kinase (TORC1/2) inhibitor with IC₅₀ of 5 nM/27 nM/7 nM/14 nM for PI3Kα/PI3Kβ/PI3Kδ/PI3Kγ, and with a Kᵣ of 17 nM for mTOR.
Purity: 98.26%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

AZD-8055
(NVP-BGT226 maleate)
Cat. No.: HY-10422
AZD-8055 is a potent, selective, and orally bioavailable ATP-competitive mTOR kinase inhibitor with an IC₅₀ of 0.8 nM. AZD-8055 inhibits both mTORC1 and mTORC2.
Purity: 99.60%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 200 mg

BGT226 maleate
(NVP-BGT226 maleate)
Cat. No.: HY-13334
BGT226 (NVP-BGT226 maleate) is a PI3K (with IC₅₀ of 4 nM, 63 nM and 38 nM for PI3Kα, PI3Kβ and PI3Kγ)/mTOR dual inhibitor which displays potent growth-inhibitory activity against human head and neck cancer cells.
Purity: 99.73%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

(32-Carbonyl)-RMC-5552
Cat. No.: HY-134903
(32-Carbonyl)-RMC-5552 is a potent mTOR inhibitor. (32-Carbonyl)-RMC-5552 inhibits mTORC1 and mTORC2 substrate (p-P70S6K-T389, p-4E-BP1-T37/46), and p-AKT1/T308 (S473) phosphorylation with pIC₅₀ of > 9. >9 and between 8 and 9, respectively (patent WO2019212990A1, example 2).
Purity: 95.04%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg, 10 mg, 25 mg

8-Aminoadenosine
(8-NH₂-Ado)
Cat. No.: HY-1275927
8-Aminoadenosine (8-NH₂-Ado), a RNA-directed nucleoside analogue, reduces cellular ATP levels and inhibits mRNA synthesis. 8-Aminoadenosine blocks Akt/mTOR signaling and induces autophagy and apoptosis in a p53-independent manner. 8-Aminoadenosine has antitumor activity.
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Arnicolide D
Cat. No.: HY-N6843
Arnicolide D is a sesquiterpene lactone isolated from Centipeda minima. Arnicolide D modulates kinase and signaling pathways and inhibits the PI3K/AKT/mTOR and STAT3 signaling pathways.
Purity: 99.20%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

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### Cbz-B3A
Cat. No.: HY-114267

Cbz-B3A is a potent and selective inhibitor of mTORC1 signaling that appear to bind to ubiquilins 1, 2, and 4, and Cbz-B3A inhibits the phosphorylation of 4EBP1.

<table>
<thead>
<tr>
<th>Purity</th>
<th>≥98.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>1 mg, 5 mg</td>
</tr>
</tbody>
</table>

### CC-115 hydrochloride
Cat. No.: HY-16962A

CC-115 hydrochloride is a potent and dual DNA-PK and mTOR kinase inhibitor with IC₅₀ of 13 nM and 21 nM, respectively. CC-115 blocks both mTORC1 and mTORC2 signaling.

<table>
<thead>
<tr>
<th>Purity</th>
<th>98.23%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>Phase 2</td>
</tr>
<tr>
<td>Size</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

### Cyclovirobuxine D
Cat. No.: HY-N0107

Cyclovirobuxine D (CVB-D) is the main active component of the traditional Chinese medicine Buxus microphylla. Cyclovirobuxine D induces autophagy and attenuates the phosphorylation of Akt and mTOR.

<table>
<thead>
<tr>
<th>Purity</th>
<th>≥95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10 mM × 1 mL, 5 mg, 10 mg, 20 mg</td>
</tr>
</tbody>
</table>

### CZ415
Cat. No.: HY-100222

CZ415 is a potent and highly selective mTOR inhibitor with a pIC₅₀ of 8.07. CZ415 inhibits mTORC1 and mTORC2 protein complex.

<table>
<thead>
<tr>
<th>Purity</th>
<th>98.43%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg</td>
</tr>
</tbody>
</table>

### D-α-Hydroxyglutaric acid (Disodium (R)-2-Hydroxyglutarate; (R)-2-Hydroxyglutaric acid; ...)
Cat. No.: HY-113038

D-α-Hydroxyglutaric acid ((R)-2-Hydroxyglutarate) is the principal metabolite accumulating in neurometabolic disease D-2-hydroxyglutaric aciduria.

<table>
<thead>
<tr>
<th>Purity</th>
<th>&gt;98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>5 mg, 10 mg, 25 mg</td>
</tr>
</tbody>
</table>

### Dactolisib (BEZ235; NVP-BEZ235)
Cat. No.: HY-50673

Dactolisib (BEZ235) is an orally active and dual pan-class I PI3K and mTOR kinase inhibitor with IC₅₀ of 4 nM/5 nM/7 nM/75 nM, and 20.7 nM for p110α/p110γ/p110δ/p110β and mTOR, respectively. Dactolisib (BEZ235) inhibits both mTORC1 and mTORC2.

<table>
<thead>
<tr>
<th>Purity</th>
<th>99.94%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>Phase 3</td>
</tr>
<tr>
<td>Size</td>
<td>50 mg, 100 mg, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

### Dactolisib Tosylate (BEZ235 Tosylate; NVP-BEZ 235 Tosylate)
Cat. No.: HY-15174

Dactolisib Tosylate (BEZ235 Tosylate) is a dual PI3K and mTOR kinase inhibitor with IC₅₀ values of 4, 75, 7, 5 nM for PI3Kα, β, γ, δ, respectively. Dactolisib Tosylate (BEZ235 Tosylate) inhibits mTORC1 and mTORC2.

<table>
<thead>
<tr>
<th>Purity</th>
<th>99.88%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>Phase 3</td>
</tr>
<tr>
<td>Size</td>
<td>10 mM × 1 mL, 50 mg, 100 mg, 200 mg, 500 mg</td>
</tr>
</tbody>
</table>

### Dihydroevocarpine
Cat. No.: HY-N2517

Dihydroevocarpine induces cytoxicity in acute myeloid leukemia via suppressing the mTORC1/2 activity.

<table>
<thead>
<tr>
<th>Purity</th>
<th>&gt;98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Data</td>
<td>No Development Reported</td>
</tr>
<tr>
<td>Size</td>
<td>1 mg, 5 mg</td>
</tr>
</tbody>
</table>

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Tel: 609-228-6898  Fax: 609-228-5909  Email: sales@MedChemExpress.com
Dihydromyricetin
(Ampelopsin; Ampeloptin)  
Cat. No.: HY-N0112

Dihydromyricetin is a potent inhibitor with an IC₅₀ of 48 µM on dihydropyrimidinase. Dihydromyricetin can activate autophagy through inhibiting mTOR signaling. Dihydromyricetin suppresses the formation of mTOR complexes (mTORC1/2).

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

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ETP-46464  
Cat. No.: HY-15521

ETP-46464 is an effective mTOR and ATR inhibitor with IC₅₀ of 0.6 and 14 nM, respectively.

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

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FT-1518  
Cat. No.: HY-107363

FT-1518 is a new generation selective, potent and oral bioavailable mTORC1 and mTORC2 inhibitor, and exhibits antitumor activity.

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

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Gedatolisib
(PKI-587; PF-05212384)  
Cat. No.: HY-10681

Gedatolisib (PKI-587) is a highly potent dual inhibitor of PI3Kα, PI3Kβ, PI3Kδ, PI3Kγ and mTOR with IC₅₀ of 0.4 nM, 5.4 nM and 1.6 nM, respectively. Gedatolisib is equally effective in both complexes of mTOR, mTORC1 and mTORC2.

Purity: 99.68%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

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GNE-317  
Cat. No.: HY-12763

GNE-317 is a PI3K/mTOR inhibitor, is able to cross the blood-brain barrier (BBB).

Purity: 99.31%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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GNE-477  
Cat. No.: HY-11042

GNE-477 is a potent and efficacious dual PI3K (IC₅₀=4 nM)/mTOR(Kᵢ=21 nM) inhibitor.

Purity: 98.70%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg

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GNE-493  
Cat. No.: HY-10811

GNE-493 is a potent, selective, and orally available dual pan-PI3-kinase/mTOR inhibitor with IC₅₀ of 3.4 nM, 12 nM, 16 nM, 16 nM and 32 nM for PI3Kα, PI3Kβ, PI3Kδ, PI3Kγ and mTOR.

Purity: 98.33%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

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DS-7423  
Cat. No.: HY-124036

DS-7423 is a dual PI3K and mTOR inhibitor, with IC₅₀ values of 15.6 nM, 34.9 nM for PI3Kα and mTOR, respectively. DS-7423 possesses anti-tumor activity.

Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

---

Everolimus
(RAD001; SDZ-RAD)  
Cat. No.: HY-10218

Everolimus (RAD001) is a Rapamycin derivative and a potent, selective and orally active mTOR inhibitor. Everolimus binds to FKBP-12 to generate an immunosuppressive complex. Everolimus inhibits tumor cells proliferation and induces cell apoptosis and autophagy.

Purity: 99.74%
Clinical Data: Launched
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSK1059615</td>
<td>HY-12036</td>
<td>A dual inhibitor of PI3Kα/β/δ/ε/γ and mTOR with IC₅₀ of 0.4 nM/0.6 nM/2 nM/5 nM and 12 nM, respectively.</td>
</tr>
<tr>
<td>Hederacolchiside A1</td>
<td>HY-N6950</td>
<td>An isolate from Pulsatilla chinensis that suppresses proliferation of tumor cells by inducing apoptosis through modulating PI3K/Akt/mTOR signaling pathway.</td>
</tr>
<tr>
<td>hSMG-1 inhibitor 11e</td>
<td>HY-124760</td>
<td>A potent and selective hSMG-1 inhibitor with an IC₅₀ of &lt;0.05 nM.</td>
</tr>
<tr>
<td>hSMG-1 inhibitor 11j</td>
<td>HY-124719</td>
<td>A pyrimidine derivative that exhibits &gt;455-fold selectivity for hSMG-1 over mTOR (IC₅₀ 50 nM), PI3Kα/γ (IC₅₀ 61 nM and 92 nM) and CDK1/CDK2 (IC₅₀ 32 μM and 7.1 μM).</td>
</tr>
<tr>
<td>JR-AB2-011</td>
<td>HY-122022</td>
<td>A selective mTORC2 inhibitor with an IC₅₀ value of 0.36 μM.</td>
</tr>
<tr>
<td>KU-0060648</td>
<td>HY-13431</td>
<td>A dual inhibitor of PI3K and DNA-PK with IC₅₀ of 4 nM, 0.5 nM, 0.1 nM, 0.594 nM and 8.6 nM for PI3Kα, PI3Kβ, PI3Kγ and DNA-PK, respectively.</td>
</tr>
<tr>
<td>L-Leucine</td>
<td>HY-N0486</td>
<td>An essential branched-chain amino acid (BCAA) that activates the mTOR signaling pathway.</td>
</tr>
<tr>
<td>MCX 28</td>
<td>HY-139832</td>
<td>A triple PI3K/mTOR/PIM inhibitor that displays low nanomolar activity.</td>
</tr>
</tbody>
</table>
MHY-1685

MHY-1685, a novel mammalian target of rapamycin (mTOR) inhibitor, provides opportunities to improve hCSC-based myocardial regeneration.

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

MT 63-78

MT 63-78 is a specific and potent direct AMPK activator with an IC_{50} of 25 μM. MT 63–78 also induces cell mitotic arrest and apoptosis. MT 63-78 blocks prostate cancer growth by inhibiting the lipogenesis and mTORC1 pathways. MT 63-78 has antitumor effects.

Purity: 98.22%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

mTOR inhibitor-1

mTOR inhibitor-1 is a novel mTOR pathway inhibitor which can suppress cells proliferation and inducing autophagy.

Purity: 99.29%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

mTOR inhibitor-2

mTOR inhibitor-2 is a high potent, selective and oral mTOR inhibitor with an IC_{50} of 7 nM. mTOR inhibitor-2 inhibits cellular phosphorylation of mTORC1 (pS6 and p4E-BP1) and mTORC2 (pAKT (S473)) substrates.

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

mTOR inhibitor-3

mTOR inhibitor-3 is a remarkably selective mTOR inhibitor with a K_{i}, of 2.5 nM. mTOR inhibitor-3 suppresses mTORC1 and mTORC2 in cellular and in vivo pharmacokinetic (PK)/pharmacodynamic (PD) experiments.

Purity: 99.08%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

mTOR inhibitor-8

mTOR inhibitor-8 is an mTOR inhibitor and autophagy inducer. mTOR inhibitor-8 inhibits the activity of mTOR via FKBP12 and induces autophagy of A549 human lung cancer cells.

Purity: 98.04%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

NV-5138

NV-5138, a leucine analog, is the first selective and orally active brain mTORC1 activator, binding to Sestrin2. NV-5138 is used for antidepressant studies.

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

MHY1485

MHY1485 is a potent cell-permeable mTOR activator that targets the ATP domain of mTOR. MHY1485 inhibits autophagy by suppression of fusion between autophagosomes and lysosomes.

Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

NV-5138 hydrochloride

NV-5138 hydrochloride, a leucine analog, is the first selective and orally active brain mTORC1 activator, binding to Sestrin2. NV-5138 hydrochloride is used for antidepressant studies.

Purity: ≥98.0%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg
Omipalisib (Cat. No.: HY-10297)

Omipalisib (GSK2126458) is an orally active and highly selective inhibitor of PI3K with $K_i$ of 0.019 nM/0.13 nM/0.24 nM/0.06 nM and 0.18 nM/0.3 nM for p110α/p110β/p110γ/mTORC1/2, respectively. Omipalisib has anti-cancer activity.

- Purity: 99.93%
- Clinical Data: Phase 1
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Onatasertib (Cat. No.: HY-16956)

Onatasertib (CC-223) is a potent, selective, and orally bioavailable inhibitor of mTOR kinase, with an $IC_{50}$ value for mTOR kinase of 16 nM. Onatasertib inhibits both mTORC1 and mTORC2.

- Purity: 95.77%
- Clinical Data: Phase 2
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

OSI-027 (Cat. No.: HY-10423)

OSI-027 (ASP7486) is a potent, selective, orally active and ATP-competitive mTOR kinase activity inhibitor with an $IC_{50}$ of 4 nM. OSI-027 targets both mTORC1 and mTORC2 with $IC_{50}$s of 22 nM and 65 nM, respectively.

- Purity: 99.40%
- Clinical Data: Phase 1
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

Palomid 529 (Cat. No.: HY-14581)

Palomid 529 is a potent inhibitor of mTORC1 and mTORC2 complexes.

- Purity: 99.47%
- Clinical Data: No Development Reported
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

PF-04691502 (Cat. No.: HY-15177)

PF-04691502 is a potent and selective inhibitor of PI3K and mTOR. PF-04691502 binds to human PI3Kα, β, γ, δ, and mTOR with $K_i$ of 1.8, 2.1, 1.6, 1.9 and 16 nM, respectively.

- Purity: 99.64%
- Clinical Data: Phase 2
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

PI-103 Hydrochloride (Cat. No.: HY-10115A)

PI-103 Hydrochloride is a dual PI3K and mTOR inhibitor with $IC_{50}$s of 8 nM, 88 nM, 48 nM, 150 nM, 20 nM, and 83 nM for p110α, p110β, p110δ, mTORC1, and mTORC2. PI-103 also inhibits DNA-PK with an $IC_{50}$ of 2 nM. PI-103 induces autophagy.

- Purity: 98.06%
- Clinical Data: No Development Reported
- Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

PI3K/MTOR Inhibitor-1 (Cat. No.: HY-112602)

PI3K/mTOR Inhibitor-1 is a potent, orally bioavailable dual PI3K/mTOR inhibitor with $IC_{50}$s of 20/376/204/46 nM and 186 nM for PI3Kα/PI3Kβ/PI3Kγ/PI3Kδ and mTOR, respectively. Antitumor activity.

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

PI3K-IN-22 (Cat. No.: HY-10620)

PI3K-IN-22 is a PI3Kα/mTOR dual kinase inhibitor. PI3K-IN-22 has $IC_{50}$s of 0.9, 0.6 nM for PI3Kα and mTOR, respectively. PI3K-IN-22 can be used for the research of cancer.

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

PI3K-IN-22A (Cat. No.: HY-100398)

PI3K-IN-22A has $IC_{50}$s of 0.9, 0.6 nM for PI3Kα and mTOR, respectively. PI3K-IN-22A can be used for the research of cancer.

- Purity: >98%
- Clinical Data: No Development Reported
- Size: 1 mg, 5 mg
### PI3K/mTOR Inhibitor-2
Cat. No.: HY-111508

PI3K/mTOR Inhibitor-2 is a potent dual pan-PI3K/mTOR inhibitor with IC$_{50}$s of 3.4/34/16/1 nM for PI3Kα/PI3Kβ/PI3Kδ/PI3Kγ and 4.7 nM for mTOR. Antitumor activity.

| Purity: | 99.45% |
| Clinical Data: | No Development Reported |
| Size: | 10 nM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg |

### PI3Kα/mTOR-IN-1
Cat. No.: HY-U00326

PI3Kα/mTOR-IN-1 is a potent PI3Kα/mTOR dual inhibitor, with an IC$_{50}$ of 7 nM for PI3Kα in a cell assay, and K$_{s}$ of 10.6 nM and 12.5 nM for mTOR and PI3Kα in a cell free assay, respectively.

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

### PKI-179 hydrochloride
Cat. No.: HY-11080A

PKI-179 hydrochloride is a potent and orally active dual PI3K/mTOR inhibitor, with IC$_{50}$s of 8 nM, 24 nM, 74 nM, 77 nM, and 0.42 nM for PI3K-α, PI3K-β, PI3K-γ, PI3K-δ and mTOR, respectively. PKI-179 also exhibits activity over E545K and H1047R, with IC$_{50}$s of 14 nM and 11 nM, respectively.

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

### Polyphyllin I
Cat. No.: HY-N0047

Polyphyllin I is a bioactive constituent extracted from Paris polyphylla, has strong anti-tumor activity. Polyphyllin I is an activator of the JNK signaling pathway and is an inhibitor of PDK1/Akt/mTOR signaling. Polyphyllin I induces autophagy, G2/M phase arrest and apoptosis.

| Purity: | 99.61% |
| Clinical Data: | No Development Reported |
| Size: | 5 mg, 10 mg, 20 mg |

### PQR530
Cat. No.: HY-107365

PQR530 is a potent, ATP-competitive, orally bioavailable and brain-penetrant dual pan-PI3K/mTORC1/2 inhibitor, with a subnanomolar K$_{i}$ toward PI3Kα and mTOR (0.84 and 0.33 nM, respectively). Antitumor activity.

| Purity: | 99.93% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |

### PQR620
Cat. No.: HY-100026

PQR620 is an orally bioavailable and selective brain penetrant inhibitor of mTORC1/2.

| Purity: | 97.08% |
| Clinical Data: | No Development Reported |
| Size: | 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg |
PQR626  
Cat. No.: HY-136660

PQR626, a rapamycin derivative, is a potent, selective, orally active, and brain-penetrant mTOR inhibitor, with an IC\textsubscript{50} of 5 nM and 3.6 nM, respectively. PQR626 can be used for the research of neurological disorders.

**Purity:** 98.02%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

QL-IX-55  
Cat. No.: HY-15281

QL-IX-55 is a selective ATP-competitive inhibitor of mTORC1/2 with IC\textsubscript{50} of 50/50/10-50 nM for Human mTORC1/Yeast mTORC1/Yeast mTORC2, respectively.

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

Rapamycin  
Cat. No.: HY-228989

Rapamycin (Sirolimus; AY-22989) is a potent and specific mTOR inhibitor with an IC\textsubscript{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1. Rapamycin is an autophagy activator, an immunosuppressant.

**Purity:** 99.94%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

Rapamycin-d3  
Cat. No.: HY-10219

Rapamycin-d3 (Sirolimus-d3; AY-228989-d3) is the deuterium labeled Rapamycin. Rapamycin is a potent and specific mTOR inhibitor with an IC\textsubscript{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1.

**Purity:** 95.30%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg

Rapamycin-d3  
Cat. No.: HY-10219

Rapamycin (Sirolimus; AY-228989) is a potent and specific mTOR inhibitor with an IC\textsubscript{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1. Rapamycin is an autophagy activator, an immunosuppressant.

**Purity:** 99.94%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

Rapamycin-d3  
Cat. No.: HY-10219

Rapamycin-d3 (Sirolimus-d3; AY-228989-d3) is the deuterium labeled Rapamycin. Rapamycin is a potent and specific mTOR inhibitor with an IC\textsubscript{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1.

**Purity:** 95.30%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg

Rapamycin-d3  
Cat. No.: HY-10219

Rapamycin (Sirolimus; AY-228989) is a potent and specific mTOR inhibitor with an IC\textsubscript{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1. Rapamycin is an autophagy activator, an immunosuppressant.

**Purity:** 99.94%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

Rapamycin-d3  
Cat. No.: HY-10219

Rapamycin-d3 (Sirolimus-d3; AY-228989-d3) is the deuterium labeled Rapamycin. Rapamycin is a potent and specific mTOR inhibitor with an IC\textsubscript{50} of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1. Rapamycin is an autophagy activator, an immunosuppressant.

**Purity:** 99.94%  
**Clinical Data:** No Development Reported  
**Size:** 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

**Rheb inhibitor NR1**  
Cat. No.: HY-124798

Rheb inhibitor NR1 is a Rheb inhibitor with an IC\textsubscript{50} of 2.1µM in the Rheb-IVK assay. Rheb inhibitor NR1 also is a selective mTORC1 inhibitor. NR1 inhibits the phosphorylation of \textsuperscript{138}pS6K1 and increases the phosphorylation of \textsuperscript{547}pAKT in a dose-dependent manner.

**Purity:** 98.12%  
**Clinical Data:** No Development Reported  
**Size:** 5 mg

RMC-4529  
Cat. No.: HY-105869

RMC-4529 has an IC\textsubscript{50} value of 1.0 nM against p-4E-BP1-(T37/46) in mTOR kinase cellular assay.

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

RMC-5552  
Cat. No.: HY-132168

RMC-5552 is a potent and selective inhibitor of mTORC1. RMC-5552 inhibits phosphorylation of mTORC1 pS6K and p4EBP1 with IC\textsubscript{50} of 0.14 nM and 0.48 nM, respectively. RMC-5552 has anti-cancer activity.

**Purity:** 98.10%  
**Clinical Data:** No Development Reported  
**Size:** 1 mg, 5 mg, 10 mg

RMC-6272  
Cat. No.: HY-134904

RMC-6272 (RM-006) is a bi-steric mTORC1-selective inhibitor. RMC-6272 exhibits potent and selective (> 10-fold) inhibition of mTORC1 over mTORC2. RMC-6272 shows improved inhibition of mTORC1 in comparison to Rapamycin, and induces more cell death in TSC2 null tumors.

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

Rotundic acid, a triterpenid obtained from 1. rotunda, induces DNA damage and cell apoptosis in hepatocellular carcinoma through AKT/mTOR and MAPK Pathways. Rotundic acid possesses anti-inflammatory and cardio-protective abilities.

Purity: 99.41%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg

Salidroside
(Rhodioloside)

Salidroside is a prolyl endopeptidase inhibitor. Salidroside alleviates cachexia symptoms in mouse models of cancer cachexia via activating mTOR signalling. Salidroside protects dopaminergic neurons by enhancing PINK1/Parkin-mediated mitophagy.

Purity: 98.86%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

Sapanisertib
(INK-128; MLN0128; TAK-228)

Sapanisertib (INK-128; MLN0128; TAK-228) is an orally available, ATP-dependent mTOR1/2 inhibitor with an IC_{50} of 1 nM for mTOR kinase.

Purity: 99.66%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

TMBIM6 antagonist-1

TMBIM6 antagonist-1, a potential TMBIM6 antagonist, prevents TMBIM6 binding to mTORC2, decreases mTORC2 activity, and also regulates TMBIM6-leaky Ca^{2+}.

Purity: 99.80%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Torin 1

Torin 1 is a potent inhibitor of mTOR with an IC_{50} of 3 nM. Torin 1 inhibits both mTORC1/2 complexes with IC_{50} values between 2 and 10 nM. Torin 1 is an effective inducer of autophagy.

Purity: 98.95%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 50 mg, 100 mg

Torin 2

Torin 2 is an mTOR inhibitor with EC_{50} of 0.25 nM for inhibiting cellular mTOR activity, and exhibits 800-fold selectivity over PI3K (EC_{50} of 200 nM). Torin 2 also inhibits DNA-PK with an IC_{50} of 0.5 nM in the cell free assay. Torin 2 can suppress both mTORC1 and mTORC2.

Purity: 99.98%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg, 200 mg

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<table>
<thead>
<tr>
<th>Cat. No.: HY-10474</th>
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<tbody>
<tr>
<td>Torkinib (PP 242) is a selective and ATP-competitive mTOR inhibitor with an IC\textsubscript{50} of 8 nM. PP242 inhibits both mTORC1 and mTORC2 with IC\textsubscript{50}s of 30 nM and 58 nM, respectively.</td>
</tr>
<tr>
<td>Purity: 98.76%</td>
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<td>Clinical Data: No Development Reported</td>
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<tr>
<td>Voxtalib (XL765; SAR245409) is a potent PI3K inhibitor, which has a similar activity toward class I PI3K (IC\textsubscript{50}s=39, 113, 9 and 43 nM for p110\textalpha, p110\textbeta, p110\textgamma, and p110\textdelta, respectively), also inhibits DNA-PK (IC\textsubscript{50}=150 nM) and mTOR (IC\textsubscript{50}=157 nM).</td>
</tr>
<tr>
<td>Purity: 99.46%</td>
</tr>
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<td>Clinical Data: Phase 2</td>
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<tr>
<th>Cat. No.: HY-15272</th>
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<tbody>
<tr>
<td>WAY-600 is a potent, ATP-competitive, and selective mTOR inhibitor with an IC\textsubscript{50} of 9 nM for recombinant mTOR enzyme. WAY-600 blocks mTOR complex 1/2 (mTORC1/2) assembly and activation.</td>
</tr>
<tr>
<td>Purity: 95.12%</td>
</tr>
<tr>
<td>Clinical Data: No Development Reported</td>
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<td>Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg, 100 mg</td>
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<tr>
<td>WAY-354 is an ATP-competitive mTOR inhibitor with an IC\textsubscript{50} of 5 nM. WAY-354 also inhibits PI3K\textalpha and PI3K\textgamma with IC\textsubscript{50}s of 1.89 \mu M and 7.37 \mu M, respectively. WAY-354 inhibits both mTORC1 and mTORC2. WYE-354 induces autophagy activation in vitro.</td>
</tr>
<tr>
<td>Purity: 98.0%</td>
</tr>
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<td>Clinical Data: No Development Reported</td>
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<td>Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg</td>
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<th>Cat. No.: HY-15271A</th>
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<tr>
<td>WYE-687 dihydrochloride is an ATP-competitive mTOR inhibitor with an IC\textsubscript{50} of 7 nM. WYE-687 dihydrochloride concurrently inhibits activation of mTORC1 and mTORC2. WYE-687 also inhibits PI3K\textalpha and PI3K\textgamma with IC\textsubscript{50}s of 81 nM and 3.11 \mu M, respectively.</td>
</tr>
<tr>
<td>Purity: \geq 98.0%</td>
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<td>Clinical Data: No Development Reported</td>
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<td>Size: 2 mg, 5 mg</td>
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<tr>
<td>Vistusertib (AZD2014) is an ATP competitive mTOR inhibitor with an IC\textsubscript{50} of 2.81 nM. AZD2014 inhibits both mTORC1 and mTORC2 complexes.</td>
</tr>
<tr>
<td>Purity: 98.53%</td>
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<td>Clinical Data: Phase 2</td>
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<tr>
<td>VS-5584 is a pan-PI3K/mTOR kinase inhibitor with IC\textsubscript{50}s of 16 nM, 68 nM, 42 nM, 25 nM, and 37 nM for PI3K\textalpha, PI3K\textbeta, PI3K\textgamma, PI3K\textdelta, and mTOR, respectively. VS-5584 simultaneously blocks mTORC2 as well as mTORC1.</td>
</tr>
<tr>
<td>Purity: 98.15%</td>
</tr>
<tr>
<td>Clinical Data: Phase 1</td>
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<tr>
<td>WYE-132 (WYE-125132) is a highly potent, ATP-competitive, and specific mTOR kinase inhibitor [IC\textsubscript{50}=0.19±0.07 nM; &gt;5,000-fold selective versus PI3K\textalpha]. WYE-132 (WYE-125132) inhibits mTORC1 and mTORC2.</td>
</tr>
<tr>
<td>Purity: 99.40%</td>
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<td>Clinical Data: No Development Reported</td>
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<td>XL388 is a highly potent and ATP-competitive mTOR inhibitor with an IC\textsubscript{50} of 9.9 nM. XL388 simultaneously inhibits both mTORC1 and mTORC2.</td>
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<tr>
<td>Purity: 99.25%</td>
</tr>
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<td>Clinical Data: No Development Reported</td>
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