Cannabinoid receptors are currently classified into three groups: central (CB1), peripheral (CB2) and GPR55, all of which are G-protein-coupled. CB1 receptors are primarily located at central and peripheral nerve terminals. CB2 receptors are predominantly expressed in non-neuronal tissues, particularly immune cells, where they modulate cytokine release and cell migration. Recent reports have suggested that CB2 receptors may also be expressed in the CNS. GPR55 receptors are non-CB1/CB2 receptors that exhibit affinity for endogenous, plant and synthetic cannabinoids. Endogenous ligands for cannabinoid receptors have been discovered, including anandamide and 2-arachidonylglycerol.
## Cannabinoid Receptor Agonists, Antagonists, Inhibitors, Activators & Modulators

<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(±)-Ibipinabant</td>
<td>HY-14791A</td>
<td>(±)-Ibipinabant ((±)-SLV319) is the racemate of SLV319. (±)-Ibipinabant ((±)-SLV319) is a potent and selective cannabinoid-1 (CB-1) receptor antagonist with an IC₅₀ of 22 nM.</td>
</tr>
<tr>
<td>2-Arachidonoylglycerol</td>
<td>HY-W011051</td>
<td>2-Arachidonoylglycerol is a second endogenous cannabinoid ligand in the central nervous system.</td>
</tr>
<tr>
<td>A-836339</td>
<td>HY-12761</td>
<td>A-836339 is a cannabinoid CB2 receptor-selective agonist; exhibits high potencies at CB(2) and selectivity over CB(1) receptors.</td>
</tr>
<tr>
<td>AM251</td>
<td>HY-15443</td>
<td>AM251 is a selective cannabinoid 1 (CB1) receptor antagonist with an IC₅₀ of 8 nM, also acts as a potent GPR55 agonist with an EC₅₀ of 39 nM.</td>
</tr>
<tr>
<td>Anandamide</td>
<td>HY-10863</td>
<td>Anandamide is an immune modulator in the central nervous system acts via not only cannabinoid (CB1 and CB2) but also other targets (e.g., GPR18/GPR55).</td>
</tr>
<tr>
<td>Bay 59-3074</td>
<td>HY-100488</td>
<td>Bay 59-3074 is a selective cannabinoid CB₁/CB₂ receptor partial agonist with Kᵢ values of 48.3 and 45.5 nM at human CB₁ and CB₂ receptors, respectively. Bay 59-3074 has analgesic properties.</td>
</tr>
<tr>
<td>BML-190</td>
<td>HY-15420</td>
<td>BML-190(IMMA) is a potent and selective CB2 receptor ligand (Ki values are 435 nM and &gt; 2 μM for CB2 and CB1 respectively).</td>
</tr>
<tr>
<td>CB1 antagonist 1</td>
<td>HY-U00397</td>
<td>CB1 antagonist 1 is an antagonist of CB1 receptor, used in the research of metabolic syndrome and obesity, neuroinflammatory disorders, cognitive disorders and psychosis, gastrointestinal disorders, and cardiovascular conditions.</td>
</tr>
<tr>
<td>CB1 antagonist 2</td>
<td>HY-116649</td>
<td>CB1 antagonist 2 is cannabionoid 1 (CB1) antagonist extracted from patent WO2016184310A1, compound 3, inhibits CB1 in vivo with an IC₅₀ of 25.5 nM.</td>
</tr>
</tbody>
</table>

**Purity:**
- 99.49%
- >97.0%
- 99.61%
- >98%
- >99.0%
- >99.0%
- >98%
- 99.34%
- 99.84%
- >98%
- 99.34%
- >98%
- 99.84%

**Clinical Data:**
- No Development Reported

**Size:**
- 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg
- 1 mg (26.4 mM * 100 μL in Acetonitrile),
- 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg
- 10 mM × 1 mL, 1 mg, 5 mg, 10 mg, 50 mg, 100 mg
- 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg
- 1 mg (144 mM * 200 μL in Ethanol)
- 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg
- 10 mM × 1 mL, 10 mg, 50 mg, 100 mg
- 1 mg, 5 mg, 10 mg
- 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Tel: 609-228-6898  Fax: 609-228-5909  Email: sales@MedChemExpress.com
**CB1 inverse agonist 1**  
Cat. No.: HY-135280

CB1 inverse agonist 1 is a highly potent, orally active, and specific inverse agonist of CB1 receptor with IC\textsubscript{50} of 7.5 nM and 4100 nM for CB1 and CB2 receptors, respectively. Anorexigenic effects.

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

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**CB2 modulator 1**  
Cat. No.: HY-135419

CB2 modulator 1 (compound 130) is a potent CB2 modulator.

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

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**GW842166X**  
Cat. No.: HY-14167

GW842166X is a potent and selective cannabinoid receptor 2 (CB2) agonist with IC\textsubscript{50} values of 63 and 95 nM for human and rat CB2, respectively.

Purity: 99.97%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

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**Leelamine hydrochloride**  
Cat. No.: HY-110028

Leelamine hydrochloride is a tricyclic diterpene molecule that is extracted from the bark of pine trees.

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

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**MDA 19**  
Cat. No.: HY-15451

MDA 19 is a selective human CB2 receptor agonist with Ki of 43.3 nM.

Purity: 99.56%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

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**CB1-IN-1** (BPRCB1184)  
Cat. No.: HY-12790

CB1-IN-1 (BPRCB1184) is a peripherally restricted CB1 receptor antagonist, with Ki of 0.3 nM and 21 nM for CB1R (EC\textsubscript{50} = 3 nM) and CB2R, respectively.

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

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**CB2R-IN-1**  
Cat. No.: HY-100328

CB2R-IN-1 is a potent cannabinoid CB2 receptor inverse agonist with a Ki of 0.9 nM.

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

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**JD-5037**  
Cat. No.: HY-18697

JD-5037 is a novel, peripherally restricted CB\textsubscript{R} receptor antagonist with an IC\textsubscript{50} of 1.5 nM.

Purity: 98.05%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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**LY2828360**  
Cat. No.: HY-16642A

LY2828360 is a slowly acting but efficacious G protein-biased cannabinoid CB\textsubscript{2} agonist, inhibiting cAMP accumulation and activating ERK1/2 signaling.

Purity: 98.99%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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**N-Oleoyl glycine**  
Cat. No.: HY-113204

N-Oleoyl glycine is a lipoamino acid, which stimulates adipogenesis associated with activation of CB1 receptor and Akt signaling pathway in 3T3-L1 adipocyte.

Purity: >99.0%  
Clinical Data: No Development Reported  
Size: 10 mM × 1 mL, 10 mg
### Olivetol
**Cat. No.: HY-W008364**

Olivetol is a naturally phenol found in lichens and produced by certain insects, acting as a competitive inhibitor of the cannabinoid receptors CB1 and CB2. Olivetol also inhibits CYP2C19 and CYP2D6 activity, with IC₅₀ of 15.3 μM, 7.21 μM and Kᵢ of 2.71 μM, 2.87 μM, respectively.

**Purity:** > 98.0%

**Clinical Data:** No Development Reported

**Size:** 10 mM × 1 mL, 100 mg

### Olorinab
**Cat. No.: HY-111110**

Olorinab (APD 371) is a highly potent, selective and fully efficacious cannabinoid receptor type 2 (CB₂) agonist, with an EC₅₀ of 6.2 nM for hCB₂.

**Purity:** > 98%

**Clinical Data:** No Development Reported

**Size:** 100 mg, 250 mg, 500 mg

### Org 27569
**Cat. No.: HY-13288**

Org 27569 is a potent CB₁ receptor allosteric modulator, which increases agonist binding, yet blocks agonist-induced CB₁ signaling.

**Purity:** 98.91%

**Clinical Data:** No Development Reported

**Size:** 10 mM × 1 mL, 10 mg, 50 mg

### Otenabant
**Cat. No.: HY-10871**

Otenabant is a potent and selective cannabinoid receptor CB₁ antagonist with Kᵢ of 0.7 nM, exhibits 10,000-fold greater selectivity against human CB₂ receptor.

**Purity:** 99.65%

**Clinical Data:** No Development Reported

**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

### Otenabant Hydrochloride
**Cat. No.: HY-10871A**

Otenabant Hydrochloride is a potent and selective cannabinoid receptor (CB₁) antagonist with a Kᵢ of 1.8 nM. Otenabant Hydrochloride also inhibits Mycobacterial membrane protein Large 3 (MMPL3).

**Purity:** > 98%

**Clinical Data:** Phase 4

**Size:** 10 mM × 1 mL, 10 mg, 50 mg

### Pregnenolone
**Cat. No.: HY-B0151**

Pregnenolone (3β-Hydroxy-5-pregnen-20-one) is a powerful neurosteroid, the main precursor of various steroid hormones including steroid ketones.

**Purity:** > 98.0%

**Clinical Data:** Phase 4

**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

### Pregnenolone monosulfate
**Cat. No.: HY-110189**

Pregnenolone monosulfate (3β-Hydroxy-5-pregnen-20-one monosulfate) is a powerful neurosteroid, the main precursor of various steroid hormones including steroid ketones.

**Purity:** > 98%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg, 50 mg

### Rimonabant
**Cat. No.: HY-14136**

Rimonabant (SR141716) is a highly potent, brain penetrated and selective central cannabinoid receptor (CB1) antagonist with a Kᵢ of 1.8 nM. Rimonabant (SR141716) also inhibits Mycobacterial membrane protein Large 3 (MMPL3).

**Purity:** > 98%

**Clinical Data:** Phase 4

**Size:** 10 mg, 50 mg, 100 mg

### Rimonabant Hydrochloride
**Cat. No.: HY-14137**

Rimonabant Hydrochloride (SR 141716A Hydrochloride) is a highly potent and selective central cannabinoid receptor (CB1) antagonist with an Kᵢ of 1.8 nM.

**Purity:** 99.79%

**Clinical Data:** Phase 4

**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg
SR144528

SR144528 is a potent and selective CB2 receptor antagonist with a $K_i$ of 0.6 nM.

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

Taranabant

Taranabant is a highly potent and selective cannabinoid 1 (CB1) receptor inverse agonist that inhibits the binding and functional activity of various agonists, with a binding $K_i$ of 0.13 nM for the human CB1R in vitro.

Purity: 99.28%
Clinical Data: Phase 3
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 25 mg

Taranabant (1R,2R)stereoisomer

Taranabant (1R,2R)stereoisomer is the R-enantiomer of Taranabant. Taranabant is a highly potent and selective cannabinoid 1 (CB1) receptor inverse agonist.

Purity: 98.15%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg

VCE-004.8

VCE-004.8, a semi-synthetic multitarget cannabinoid, is a specific PPARγ and CB2 receptor dual agonist with potent anti-inflammatory activity. VCE-004.8 inhibits prolyl-hydroxylases (PHDs) and activates the HIF pathway.

Purity: >98%
Clinical Data: No Development Reported
Size: 100 mg, 250 mg, 500 mg

WIN 55,212-2 Mesylate

WIN 55,212-2 Mesylate is a potent aminoalkylindole cannabinoid (CB) receptor agonist with $K_i$s of 62.3 and 3.3 nM for human recombinant CB1 and CB2 receptors, respectively.

Purity: 99.01%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

Yangonin

Yangonin exhibits affinity for the human recombinant cannabinoid CB1 receptor with an $IC_{50}$ and a $K_i$ of 1.79 ± 0.53 μM and 0.72±0.21 μM, respectively.

Purity: 99.72%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg

β-Caryophyllene

β-Caryophyllene is a CB2 receptor agonist.

Purity: 94.40%
Clinical Data: No Development Reported
Size: 500 mg