P-glycoprotein (P-gp) also known as multidrug resistance protein 1 (MDR1) is an important protein of the cell membrane that pumps many foreign substances out of cells. More formally, it is an ATP-dependent efflux pump with broad substrate specificity. P-gp is extensively distributed and expressed in the intestinal epithelium where it pumps xenobiotics (such as toxins or drugs) back into the intestinal lumen, in liver cells where it pumps them into bile ducts, in the cells of the proximal tubular of the kidney where it pumps them into urine-conducting ducts, and in the capillary endothelial cells comprising the blood–brain barrier and blood-testis barrier, where it pumps them back into the capillaries. Some cancer cells also express large amounts of P-gp, which renders these cancers multi-drug resistant. P-gp is an ATP-dependent drug efflux pump for xenobiotic compounds with broad substrate specificity. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. This protein also functions as a transporter in the blood–brain barrier.
**P-glycoprotein Inhibitors & Modulators**

### (20S)-Protopanaxadiol (20-Epiprotopanaxadiol; 20(S)-APPD)  
**Cat. No.: HY-N0797**

**Bioactivity:** (20S)-Protopanaxadiol (20-Epiprotopanaxadiol) is an aglycon metabolic derivative of the protopanaxadiol-type ginseng saponin; apoptosis inducer. IC50 value: Target: apoptosis inducer (20S)-Protopanaxadiol was used to induce cytotoxicity for two human glioma cell lines, SF188 and U87MG. For the...

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg

### Alisol F  
**Cat. No.: HY-N0854**

**Bioactivity:** Alisol F is a natural product.

**Purity:** 96.20%

**Clinical Data:** No Development Reported

**Size:** 5 mg, 10 mg

### Bircodar (VX-710)  
**Cat. No.: HY-13574A**

**Bioactivity:** Bircodar (VX-710) is a modulator of P-glycoprotein and MRP-1; shows effective chemosensitizing activity in multidrug resistant cells.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 1 mg, 5 mg, 10 mg, 20 mg

### Dofequidar (MS-209)  
**Cat. No.: HY-17013**

**Bioactivity:** Dofequidar (MS-209) is a novel quinoline compound, which can reverse P-glycoprotein (P-gp)-mediated MDR.

**Purity:** >98%

**Clinical Data:** Phase 1

**Size:** 5 mg, 10 mg, 50 mg, 100 mg

### Dofequidar fumarate (MS-209 fumarate)  
**Cat. No.: HY-17013A**

**Bioactivity:** Dofequidar fumarate (MS-209 fumarate), an orally active quinoline compound, has been reported to overcome MDR by inhibiting ABCB1/P-gp, ABCG2/MDR-associated protein 1, or both.

**Purity:** 99.99%

**Clinical Data:** Phase 1

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

### Elacridar (GF120918, GW0918, GG918, GW120918)  
**Cat. No.: HY-50879**

**Bioactivity:** Elacridar is a potent P-glycoprotein (Pgp) and BCRP inhibitor.

**Purity:** 98.47%

**Clinical Data:** No Development Reported

**Size:** 10 mg, 50 mg, 100 mg, 200 mg, 500 mg

### Elacridar hydrochloride (GF120918A)  
**Cat. No.: HY-50880**

**Bioactivity:** Elacridar HCl (GF120918, GW0918) is a P-glycoprotein inhibitor, and has been used both in vitro and in vivo as a tool inhibitor of P-glycoprotein (Pgp) to investigate the role of transporters in the disposition of various test molecules. IC50 value: Target: P-glycoprotein In vitro, GF120918A...

**Purity:** 98.87%

**Clinical Data:** No Development Reported

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

### Encequidar (HM30181; HM30181A)  
**Cat. No.: HY-13646**

**Bioactivity:** Encequidar (HM30181) is a potent and selective inhibitor of P-glycoprotein.

**Purity:** 98.12%

**Clinical Data:** Phase 1

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

### Encequidar mesylate (HM30181 (mesylate); HM30181A (mesylate))  
**Cat. No.: HY-13646A**

**Bioactivity:** Encequidar (mesylate) (HM30181 (mesylate)) is a competitive and potent P-glycoprotein inhibitor.

**Purity:** 99.76%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg

### MCI826  
**Cat. No.: HY-U00247**

**Bioactivity:** MCI826 is a P-glycoprotein (P-gp) antagonist.

**Purity:** >98%

**Clinical Data:** No Development Reported

**Size:** 1 mg, 5 mg, 10 mg, 20 mg

---

Tel: 609-228-6898  Fax: 609-228-5909  Email: sales@MedChemExpress.com
### NSC23925

**Cat. No.: HY-19626**

**Bioactivity:** NSC23925 is a novel, selective and effective P-glycoprotein (Pgp) inhibitor.

**Purity:** 99.23%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg, 25 mg

---

### P-gp inhibitor 1

**Cat. No.: HY-101791**

**Bioactivity:** P-gp inhibitor 1 is a novel inhibitor reversing P-glycoprotein-mediated multidrug resistance.

**Purity:** >98%

**Clinical Data:** No Development Reported

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

---

### P-gp modulator 1

**Cat. No.: HY-112912**

**Bioactivity:** P-gp modulator 1 is a high affinity, orally available modulator of P-glycoprotein (Pgp), can reverse the Pgp-mediated multidrug resistance (MDR) [1].

**Purity:** >98%

**Clinical Data:** No Development Reported

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

---

### Polyoxylethylene stearate (POES)

**Cat. No.: HY-101530**

**Bioactivity:** Polyoxylethylene stearate (POES) is a non-ionic emulsifying agent.

**Purity:**

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 200 mg, 1 g, 5 g

---

### Reversan (CBLC4H10)

**Cat. No.: HY-107643**

**Bioactivity:** Reversan (CBLC4H10) is a potent and nontoxic multidrug resistance-associated protein 1 (MRP1) and P-glycoprotein (Pgp) inhibitor [1, 2].

**Purity:** 95.0%

**Clinical Data:** No Development Reported

**Size:** 2 mg, 5 mg

---

### Risperidone (R 64 766)

**Cat. No.: HY-11018**

**Bioactivity:** Risperidone is a serotonin 5-HT<sub>2</sub> receptor blocker, P-Glycoprotein inhibitor and potent dopamine D<sub>2</sub> receptor antagonist, with K<sub>i</sub> of 4.8, 5.9 nM for 5-HT<sub>2A</sub> and dopamine D<sub>2</sub> receptor, respectively.

**Purity:** 99.16%

**Clinical Data:** Launched

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

---

### Sinapine

**Cat. No.: HY-N5077**

**Bioactivity:** Sinapine is an alkaloid from seeds of the cruciferous species which shows favorable biological activities such as antioxidant and radio-protective activities.

**Purity:** 99.72%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg

---

### Sinapine thiocyanate

**Cat. No.: HY-N0450**

**Bioactivity:** Sinapine is an alkaloid from seeds of the cruciferous species which shows favorable biological activities such as antioxidant and radio-protective activities.

**Purity:** 98.32%

**Clinical Data:** No Development Reported

**Size:** 10mM x 1mL in DMSO, 10 mg, 25 mg, 50 mg, 100 mg, 200 mg

---

### Tariquidar (XR9576)

**Cat. No.: HY-10550**

**Bioactivity:** Tariquidar is a potent and specific inhibitor of P-glycoprotein (P-gp) with the high affinity (K<sub>i</sub>=5.1±0.9 nM).

**Purity:** 98.57%

**Clinical Data:** Phase 3

**Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg

---
| **Bioactivity:** Tariquidar methanesulfonate, hydrate is a potent and specific inhibitor of **P-glycoprotein (P-gp)** with a $K_d$ of 5.1 nM. |
| **Purity:** 98.02% |
| **Clinical Data:** Phase 3 |
| **Size:** 10mM x 1mL in DMSO, 10 mg, 50 mg, 100 mg |

| **Bioactivity:** Valspodar is a selective **P-glycoprotein** inhibitor that has been used as an experimental cancer treatment and chemosensitizer. |
| **Purity:** 99.27% |
| **Clinical Data:** Phase 3 |
| **Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **Bioactivity:** Zamicastat (BIA 5-1058) is a **dopamine β-hydroxylase (DBH)** inhibitor that could cross the blood-brain barrier (BBB) and cause central as well as peripheral effects. Zamicastat is also a concentration-dependent dual **P-gp** and **BCRP** inhibitor with $IC_{50}$ values of 73.8 μM and 17.0 μM, respectively.

Zamicastat (BIA 5-1058) is a dopamine β-hydroxylase (DBH) inhibitor that could cross the blood-brain barrier (BBB) and cause central as well as peripheral effects. Zamicastat is also a concentration-dependent dual P-gp and BCRP inhibitor with $IC_{50}$ values of 73.8 μM and 17.0 μM, respectively. Zamicastat is also a concentration-dependent dual P-gp and BCRP inhibitor with $IC_{50}$ values of 73.8 μM and 17.0 μM, respectively...

| **Purity:** 99.95% |
| **Clinical Data:** No Development Reported |
| **Size:** 10mM x 1mL in DMSO, 5 mg, 10 mg |

| **Bioactivity:** Zosuquidar (LY335979) is a potent negative modulator of P-glycoprotein-mediated multidrug resistance with $K_i$ of 60 nM. IC$50$ value: 60 nM (Ki). Target: P-glycoprotein Zosuquidar (LY335979) is a potent modulator of P-glycoprotein-mediated multidrug resistance with $K_i$ of 60 nM. Zosuquidar binds with...

Zosuquidar (LY335979) is a potent negative modulator of P-glycoprotein-mediated multidrug resistance with $K_i$ of 60 nM. IC$50$ value: 60 nM (Ki). Target: P-glycoprotein Zosuquidar (LY335979) is a potent modulator of P-glycoprotein-mediated multidrug resistance with $K_i$ of 60 nM. Zosuquidar binds with...

| **Purity:** 98.33% |
| **Clinical Data:** Phase 3 |
| **Size:** 5 mg, 10 mg, 50 mg, 100 mg |

| **Bioactivity:** Zosuquidar trihydrochloride (RS 33295-198 trihydrochloride; LY-335979 trihydrochloride) is an inhibitor of **P-glycoprotein** with a $K_i$ value of 59 nM. |
| **Purity:** 98.75% |
| **Clinical Data:** Phase 3 |
| **Size:** 10 mg, 50 mg, 100 mg |