ATP Synthase

ATPases are a class of enzymes that catalyze the decomposition of ATP into ADP and a free phosphate ion. This dephosphorylation reaction releases energy, which the enzyme (in most cases) harnesses to drive other chemical reactions that would not otherwise occur. Some such enzymes are integral membrane proteins and move solutes across the membrane, typically against their concentration gradient. These are called transmembrane ATPases. Transmembrane ATPases import many of the metabolites necessary for cell metabolism and export toxins, wastes, and solutes that can hinder cellular processes. Such as the sodium-potassium exchanger (or Na⁺/K⁺ ATPase) and the hydrogen potassium ATPase (H⁺/K⁺ ATPase or gastric proton pump) that acidifies the contents of the stomach.
## ATP Synthase Inhibitors

### ATP synthase inhibitor 1

ATP synthase inhibitor 1 is a potent inhibitor of the \( c \) subunit of the \( F_{1}F_{0} \) ATP synthase complex, inhibits mitochondrial permeability transition pore (mPTP) opening, does not affect ATP levels.

**Cat. No.: HY-112715**

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

### BTB06584

BTB06584 is an IF1-dependent selective inhibitor of the mitochondrial F1Fo-ATPase. Target: ATPase activity with no effect on \( \Delta \Psi_{m} \) or O2 consumption.

**Cat. No.: HY-15877**

- **Purity:** 98.48%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

### Gboxin

Gboxin is an oxidative phosphorylation inhibitor that targets glioblastoma. Gboxin inhibits the activity of \( F_{1}F_{0} \) ATP synthase. Antitumour activity.

**Cat. No.: HY-111651**

- **Purity:** 99.32%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

### Oligomycin A (MCH 32)

Oligomycin A, created by Streptomyces, acts as a mitochondrial \( F_{1}F_{0} \)-ATPase inhibitor, with a \( K_{i} \) of 1 \( \mu \)M; Oligomycin A shows anti-fungal activity.

**Cat. No.: HY-16589**

- **Purity:** 99.94%
- **Clinical Data:** No Development Reported
- **Size:** 10 mM × 1 mL, 1 mg, 5 mg

### Oligomycin B

Oligomycin B is an antibiotic isolated from marine Streptomyces, used as an eukaryotic ATP synthase inhibitor, induces apoptosis.

**Cat. No.: HY-N6784**

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