PGE synthase
Prostaglandin E synthase

PGE synthase (Prostaglandin E synthase), which converts cyclooxygenase (COX)-derived prostaglandin (PG) H2 to PGE2, occurs in multiple forms with distinct enzymatic properties, modes of expression, cellular and subcellular localizations and intracellular functions. Cytosolic PGES (cPGES) is a cytosolic protein that is constitutively expressed in a wide variety of cells and tissues and is associated with heat shock protein 90 (Hsp90). Membrane-associated PGES (mPGES), the expression of which is stimulus-inducible and is downregulated by anti-inflammatory glucocorticoids, is a perinuclear protein belonging to the microsomal glutathione S-transferase (GST) family. These two PGESs display distinct functional coupling with upstream COXs in cells; cPGES is predominantly coupled with the constitutive COX-1, whereas mPGES is preferentially linked with the inducible COX-2. Several cytosolic GSTs also have the capacity to convert PGH2 to PGE2 in vitro. Accumulating evidence has suggested that mPGES participates in various pathophysiological states in which COX-2 is involved, implying that mPGES represents a potential novel target for drug development.
## PGE synthase Inhibitors & Agonists

### Benzydamine hydrochloride

Cat. No.: HY-30235A

Benzydamine hydrochloride is a locally-acting nonsteroidal anti-inflammatory drug with local anaesthetic and analgesic properties, selectively binds to prostaglandin synthetase and has notable in vitro antibacterial activity.

**Purity:** 98.79%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 100 mg

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### Bismuth Subsalicylate

(Bismuth oxysalicylate; Bismuth(III) salicylate basic)

Cat. No.: HY-B0550

Bismuth Subsalicylate is the active ingredient in Pepto-Bismol and inhibits prostaglandin G/H Synthase 1/2. Target: Others Bismuth Subsalicylate reduces inflammation/irritation of stomach and intestinal lining through inhibition of prostaglandin G/H Synthase 1/2.

**Purity:** >98%
**Clinical Data:** Launched
**Size:** 500 mg, 5 g, 10 g

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### Cafestol

Cat. No.: HY-N6257

Cafestol, one of the major components of coffee, is a coffee-specific diterpene. Cafestol is an ERK inhibitor for AP-1-targeted activity against PGE, production and the mRNA expression of cyclooxygenase (COX)-2 in LPS-activated RAW264.7 cells.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 20 mg

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### Dehydroevodiamine

Cat. No.: HY-N2106

Dehydroevodiamine is a major bioactive quinazoline alkaloid isolated from Evodiae Fructus, has an antiarrhythmic effect in guinea-pig ventricular myocytes.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 20 mg

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### Ethyl Caffeate

Cat. No.: HY-N6966

Ethyl Caffeate is a natural phenolic compound isolated from Bidens pilosa.

**Purity:** 98.91%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

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### Flurbiprofen

(dl-Flurbiprofen)

Cat. No.: HY-10582

Flurbiprofen is a nonsteroidal anti-inflammatory agent (NSAIA) with antipyretic and analgesic activity. Target: PGE synthase Flurbiprofen, a propionic acid derivative, is a nonsteroidal anti-inflammatory agent (NSAIA) with antipyretic and analgesic activity.

**Purity:** 99.85%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 100 mg, 500 mg

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### Furprofen

Cat. No.: HY-106907

Furprofen is a non-steroidal anti-inflammatory drug (NSAID) with analgesic properties. Furprofen acts via the inhibition of prostaglandin (PGE) synthesis. Furprofen can be treated orally for the relief of pain.

**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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### HPGDS inhibitor 1

Cat. No.: HY-10439

HPGDS inhibitor 1 is a novel and selective Hematopoietic Prostaglandin D Synthase (HPGDS) inhibitor with an IC50 Value of 0.7 nM.

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

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### HPGDS inhibitor 2

Cat. No.: HY-126134

HPGDS inhibitor 2 is a highly potent and selective hematopoietic prostaglandin D synthase (H-PGDS) inhibitor with an IC50 of 9.9 nM.

**Purity:** 99.79%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

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### hPGDS-IN-1

Cat. No.: HY-12791

hPGDS-IN-1 is a hPGDS inhibitor with IC50 of 12 nM in the Fluorescence Polarization Assay or the EIA assay. IC50 value: 12 nM Target: hPGDS The detailed information please refer to WO2011044307A1 and WO2010080563A2.

**Purity:** 99.82%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

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<table>
<thead>
<tr>
<th>Compound</th>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQL-79</td>
<td>HY-108259</td>
<td>HQL-79 is a potent, selective and orally active human hematopoietic prostaglandin D synthase (H-PGDS) inhibitor, highly selectively inhibits the synthesis of PGD2, and acts as an anti-allergic agent, with a Kd of 0.8 μM and an IC50 of 6 μM. Purity: &gt;99.0% Clinical Data: No Development Reported Size: 5 mg</td>
</tr>
<tr>
<td>Limaprost</td>
<td>HY-B0683</td>
<td>Limaprost (OP1206) is a PGE1 analog and potent platelet adhesion inhibitor. Purity: 99.95% Clinical Data: Launched Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg</td>
</tr>
<tr>
<td>MF63</td>
<td>HY-13283</td>
<td>MF63 is a selective mPGES-1 inhibitor with an IC50 of 0.9 nM and 1.3 nM for pig mPGES-1 and human mPGES-1 enzyme, respectively. Purity: 98.94% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>PGS-IN-1</td>
<td>HY-101587</td>
<td>PGS-IN-1 is a potent inhibitor of prostaglandin synthetase (PGS) with an IC50 of 0.28 μM; also inhibits 5-lipoxygenase with an IC50 of 1.05 μM. Purity: &gt;98% Clinical Data: No Development Reported Size: 1 mg, 5 mg, 10 mg, 20 mg</td>
</tr>
<tr>
<td>Pranoprofen</td>
<td>HY-B0336</td>
<td>Pranoprofen is a non-steroidal anti-inflammatory drug used in ophthalmology. Target: PGE2 Pranoprofen 0.1% was found to be as effective as diclofenac sodium 0.1% in reducing inflammation and pain after strabismus surgery. Purity: 98.48% Clinical Data: Launched Size: 10 mM × 1 mL, 100 mg, 500 mg</td>
</tr>
<tr>
<td>Suprofen (TN-762)</td>
<td>HY-80270</td>
<td>Suprofen (TN-762) is a non-steroidal anti-inflammatory drug (NSAID). Purity: 99.44% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 10 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>Zomepirac sodium salt</td>
<td>HY-B0890</td>
<td>Zomepirac sodium salt is a pyrrole-acetic acid structurally related to tolmetin sodium; a prostaglandin synthetase inhibitor. Purity: 99.45% Clinical Data: No Development Reported Size: 10 mM × 1 mL, 100 mg, 500 mg</td>
</tr>
</tbody>
</table>