# PGE synthase

## Prostaglandin E synthase

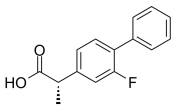
PGE synthase (Prostaglandin E synthase), which converts cyclooxygenase (COX)-derived prostaglandin $H_2$ ($PGH_2$) to $PGE_2$, is known to comprise a group of at least three structurally and biologically distinct enzymes. There are membrane-associated PGES (mPGES)-1, mPGES-2, and cytosolic PGES (cPGES).

mPGES-1 is a perinuclear protein that is markedly induced by proinflammatory stimuli and downregulated by anti-inflammatory glucocorticoids as in the case of COX-2. It is functionally coupled with COX-2 in marked preference to COX-1. mPGES-2 is synthesized as a Golgi membrane-associated protein, and the proteolytic removal of the N-terminal hydrophobic domain leads to the formation of a mature cytosolic enzyme. This enzyme is rather constitutively expressed in various cells and tissues and is functionally coupled with both COX-1 and COX-2. cPGES is constitutively expressed in a wide variety of cells and is functionally linked to COX-1 to promote immediate $PGE_2$ production.

## PGE synthase Inhibitors & Agonists

### (S)-Flurbiprofen
**(Esflurbiprofen)** Cat. No.: HY-15123

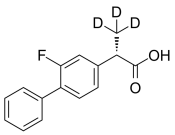
(S)-Flurbiprofen is an active enantiomer of Flurbiprofen, with $IC_{50}$ values of 0.48 μM and 0.47 μM for **COX-1** and **COX-2**, respectively.



**Purity:** 99.83%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 100 mg, 250 mg, 500 mg

### (S)-Flurbiprofen-d3
**(Esflurbiprofen-d3)** Cat. No.: HY-15123S

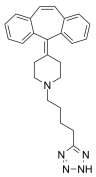
(S)-Flurbiprofen-d3 (Esflurbiprofen-d3) is the deuterium labeled (S)-Flurbiprofen.
(S)-Flurbiprofen is an active enantiomer of Flurbiprofen, with $IC_{50}$ values of 0.48 μM and 0.47 μM for **COX-1** and **COX-2**, respectively.



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

### AT-56
Cat. No.: HY-13988

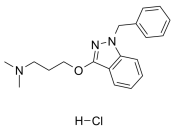
AT-56 is a potent, selective and orally active inhibitor of **lipocalin-type prostaglandin D synthase (L-PGDS)**, with an $IC_{50}$ of 95 μM and $K_i$ of 75 μM. AT-56 could selectively suppress the drowsiness or pain reaction mediated by **L-PGDS**-catalyzed $PGD_2$.



**Purity:** ≥98.0%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg

### Benzydamine hydrochloride
Cat. No.: HY-30235A

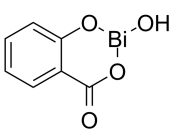
Benzydamine hydrochloride is a locally-acting nonsteroidal anti-inflammatory drug with local anaesthetic and analgesic properties; selectively binds to prostaglandin synthetase and has notable in vitro antibacterial activity.



**Purity:** 98.02%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 100 mg

### Bismuth Subsalicylate
**(Bismuth oxysalicylate; Bismuth(III) salicylate basic)** Cat. No.: HY-B0550

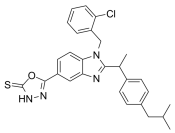
Bismuth Subsalicylate is a potent and orally active antacid and **anti-diarrheal agent**. Bismuth Subsalicylate reduces inflammation/irritation of stomach and intestinal lining through inhibition of **prostaglandin synthesis** in vivo.



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

### BRP-201
Cat. No.: HY-144237

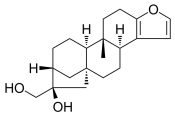
Brp-201 is considered as a promising therapeutic target for the next generation of anti-inflammatory drugs in the treatment of inflammatory diseases. It is a new, effective and selective inhibitor of mPGES-1 with an $IC_{50}$ value of 0.42 μM.



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

### Cafestol
Cat. No.: HY-N6257

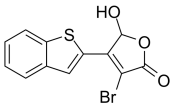
Cafestol, one of the major components of coffee, is a coffee-specific diterpene from. Cafestol is a **ERK** inhibitor for AP-1-targeted activity against $PGE_2$ production and the mRNA expression of **cyclooxygenase (COX)-2** in LPS-activated RAW264.7 cells.



**Purity:** 99.91%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 20 mg

### CAY10526
Cat. No.: HY-118119

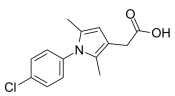
CAY10526 is a specific microsomal PGE2 synthase-1 (**mPGES1**) inhibitor. CAY10526 inhibits PGE2 production through the selective modulation of mPGES1 expression but does not affect COX-2.



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

### Clopirac
Cat. No.: HY-W173220

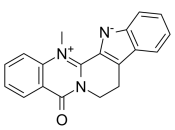
Clopirac is a potent and orally active inhibitor of **prostaglandin synthetase**. Clopirac is an anti-inflammatory agent.



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

### 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.

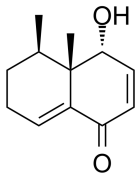


**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 5 mg, 10 mg, 20 mg

## Desoxo-narchinol A

Cat. No.: HY-N8435

Desoxo-narchinol A is an orally active and potent anti-inflammatory agent. Desoxo-narchinol A can be isolated from the roots and rhizomes of Nardostachys jatamansi. Desoxo-narchinol A can be used for septic shock and inflammatory diseases research.

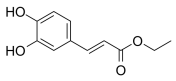


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

## Ethyl Caffeate

Cat. No.: HY-N6966

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

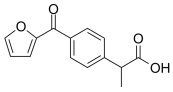


Purity: 98.91%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 10 mg, 25 mg, 50 mg, 100 mg

## Furprofen

Cat. No.: HY-106907

Furprofen is an 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.

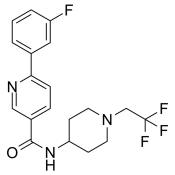


Purity: 99.85%
Clinical Data:
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

## HPGDS inhibitor 1

Cat. No.: HY-10439

HPGDS inhibitor 1 is a potent, selective and orally active **Hematopoietic Prostaglandin D Synthase (HPGDS)** inhibitor with an $IC_{50}$s of 0.6 nM and 32 nM in enzyme and cellular assays, respectively. HPGDS inhibitor 1 does not inhibit human L-PGDS, mPGES, COX-1, COX-2, or 5-LOX.

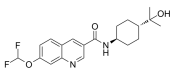


Purity: 99.04%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

## 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 $IC_{50}$ of 9.9 nM.

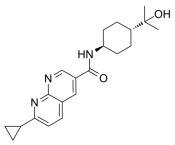


Purity: 99.79%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

## HPGDS inhibitor 3

Cat. No.: HY-146662

HPGDS inhibitor 3 is an orally active and highly potent peripherally restricted hematopoietic prostaglandin D synthase (**H-PGDS**) inhibitor with $IC_{50}$ value of 9.4 nM and $EC_{50}$ of 42 nM, respectively.

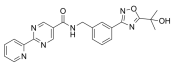


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

## 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.

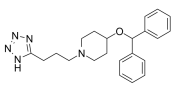


Purity: 99.82%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg

## HQL-79

Cat. No.: HY-108259

HQL-79, a potent, selective and orally active human **hematopoietic prostaglandin D synthase (H-PGDS)** inhibitor, highly selectively inhibits the synthesis of $PGD_2$, and acts as an anti-allergic agent, with a $K_d$ of 0.8 μM and an $IC_{50}$ of 6 μM.



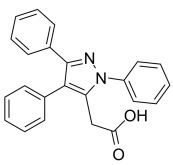
Purity: 99.87%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

## Isofezolac

(LM 22070)

Cat. No.: HY-105939

Isofezolac (LM 22070) is a non-steroidal anti-inflammatory drug (NSAID) that inhibits prostaglandin-synthetase. Isofezolac anti-inflammatory, and antipyretic properties.



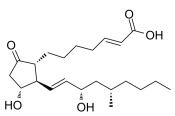
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

## Limaprost

(17α,20-dimethyl-δ2-PGE1; ONO1206; OP1206)

Cat. No.: HY-B0683

Limaprost (OP1206) is a **PGE1** analogue and a potent and orally active vasodilator. Limaprost increases blood flow and inhibits platelet aggregation. Limaprost pain relief, has antianginal effects, and can be used for ischaemic symptoms research.

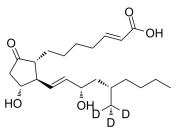


Purity: 99.95%
Clinical Data: Launched
Size: 10 mM × 1 mL, 2 mg, 5 mg, 10 mg, 50 mg

## Limaprost-d3

Cat. No.: HY-B0683S

Limaprost-d3 (17α,20-dimethyl-δ2-PGE1-d3) is the deuterium labeled Limaprost. Limaprost (OP1206) is a **PGE1** analogue and a potent and orally active vasodilator. Limaprost increases blood flow and inhibits platelet aggregation.

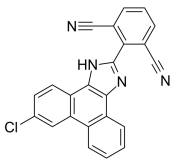


**Purity:** >98%
**Clinical Data:**
**Size:** 500 μg, 5 mg

## MF63

Cat. No.: HY-13283

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.

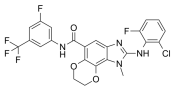


**Purity:** 99.05%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

## mPGES1-IN-3

Cat. No.: HY-100864

mPGES1-IN-3 (Compound 17d) is a potent and selective microsomal prostaglandin E2 synthase-1 (**mPGES-1**) inhibitor, which exhibits excellent mPGES-1 enzyme ($IC_{50}$: 8 nM), cell (A549 $IC_{50}$: 16.24 nM) and human whole blood potency ($IC_{50}$: 249.9 nM).

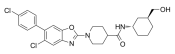


**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 5 mg

## PF-4693627

Cat. No.: HY-125415

PF-4693627 is a potent, selective and orally bioavailable microsomal prostaglandin E synthase-1 (**mPGES-1**) inhibitor ($IC_{50}$=3 nM) for the treatment of inflammation caused by osteoarthritis (OA) and rheumatoid arthritis (RA).

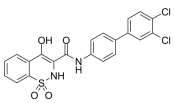


**Purity:** 98.88%
**Clinical Data:** No Development Reported
**Size:** 10 mg

## PF-9184

Cat. No.: HY-19622

PF-9184 is a potent and highly selective inhibitor of human **microsomal prostaglandin E synthase-1 (mPGES-1)**, with an $IC_{50}$ of 16.5 nM. PF-9184 inhibits IL-1β-induced $PGE_2$ synthesis in vitro.



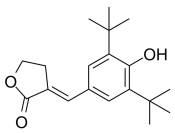
**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 5 mg

## PGS-IN-1

(KME-4)

Cat. No.: HY-101587

PGS-IN-1 is a potent inhibitor of **prostaglandin synthetase** (PGS) with an $IC_{50}$ of 0.28 μM; also inhibits **5-lipoxygenase** with an $IC_{50}$ of 1.05 μM.

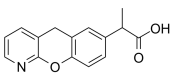


**Purity:** 99.51%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 5 mg, 10 mg, 20 mg

## Pranoprofen

Cat. No.: HY-B0336

Pranoprofen is a non-steroidal anti-inflammatory agent (**NSAID**) for the research of keratitis or other ophthalmology diseases. Pranoprofen inhibit **COX-1** and **COX-2** enzymes, thus blocking arachidonic acid converted to eicosanoids and reducing prostaglandins synthesis.



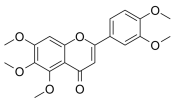
**Purity:** 99.37%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 100 mg, 500 mg

## Sinensetin

(Pedalitin permethyl ether)

Cat. No.: HY-N0297

Sinensetin is a methylated flavone found in certain citrus fruits. pocess potent antiangiogenesis and anti-inflammatory, sinensetin enhances adipogenesis and lipolysis.

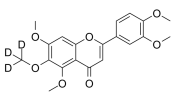


**Purity:** 99.87%
**Clinical Data:** No Development Reported
**Size:** 10 mM × 1 mL, 5 mg, 10 mg, 25 mg

## Sinensetin-d3

Cat. No.: HY-N0297S

Sinensetin-d3 is the deuterium labeled Sinensetin. Sinensetin is a methylated flavone found in certain citrus fruits. pocess potent antiangiogenesis and anti-inflammatory, sinensetin enhances adipogenesis and lipolysis.



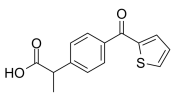
**Purity:** >98%
**Clinical Data:** No Development Reported
**Size:** 1 mg, 10 mg

## Suprofen

(TN-762)

Cat. No.: HY-B0270

Suprofen (TN-762) is a non-steroidal anti-inflammatory drug (NSAID).

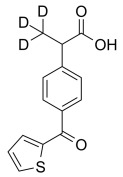


**Purity:** 99.11%
**Clinical Data:** Launched
**Size:** 10 mM × 1 mL, 10 mg, 50 mg, 100 mg, 500 mg

## Suprofen-d3

Cat. No.: HY-B0270S

Suprofen-d3 (TN-762-d3) is the deuterium labeled Suprofen. Suprofen (TN-762) is a non-steroidal anti-inflammatory drug (NSAID).

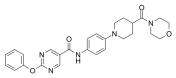


Purity: >98%
Clinical Data:
Size: 2.5 mg, 25 mg

## TFC 007

Cat. No.: HY-110167

TFC-007, a selective hematopoietic prostaglandin D synthase (**H-PGDS**) inhibitor, show high inhibitory activity against H-PGDS enzyme ($IC_{50}$ value of 83 nM).

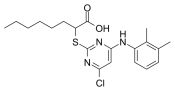


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

## YS121

Cat. No.: HY-111140

YS121 is a dual inhibitor of microsomal prostaglandin E2 synthase-1 (**mPGES-1**; $IC_{50}$=3.4 μM) and 5-lipoxygenase (**5-LOX**; $IC_{50}$=6.5 μM). YS121 dose- dependently reduces PGE2 production with $EC_{50}$=12 μM in IL-1β-stimulated A549 cells.



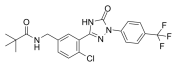
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

## Zaloglanstat

(ISC-27864; GRC-27864)

Cat. No.: HY-139589

Zaloglanstat (ISC-27864) is the inhibitor of the **microsomal prostaglandin E synthase-1 (mPGES-1)**, and can be used to study asthma, osteoarthritis, rheumatoid arthritis, acute or chronic pain and neurodegenerative diseases, etc.



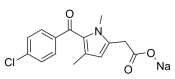
Purity: 99.73%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

## Zomepirac sodium salt

(McN-2783-21-98)

Cat. No.: HY-B0890

Zomepirac sodium salt (McN-2783-21-98) is a potent **prostaglandin biosynthesis** inhibitor. Zomepirac sodium salt is a non-steroidal anti-inflammatory drug (NSAID). Zomepirac sodium salt can cause immune-mediated liver injury.

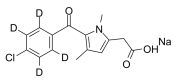


Purity: 99.42%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 100 mg, 500 mg

## Zomepirac-d4 sodium salt

Cat. No.: HY-B0890S

Zomepirac-d4 sodium salt is the deuterium labeled Zomepirac sodium salt. Zomepirac sodium salt (McN-2783-21-98) is a potent **prostaglandin biosynthesis** inhibitor. Zomepirac sodium salt is a non-steroidal anti-inflammatory drug (NSAID).



Purity: >98%
Clinical Data: No Development Reported
Size: 2.5 mg, 5 mg, 10 mg, 25 mg