

Product Data Sheet

PGS-IN-1

Cat. No.: HY-101587 CAS No.: 102271-49-8 Molecular Formula: $C_{19}H_{26}O_3$ Molecular Weight: 302.41

Target: PGE synthase; Lipoxygenase

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease

Storage: Powder -20°C 3 years

In solvent

4°C 2 years -80°C 6 months

-20°C 1 month

BIOLOGICAL ACTIVITY

Description	PGS-IN-1 is a potent inhibitor of prostaglandin synthetase (PGS) with an IC $_{50}$ of 0.28 μ M; also inhibits 5-lipoxygenase with an IC $_{50}$ of 1.05 μ M.
IC ₅₀ & Target	5-Lipoxygenase 1.05 μM (IC ₅₀)
In Vitro	The synthesized α -benzulidene- γ -butyrolactones are pure isomers (either cis or trans). PGS-IN-1 is the trans isomer. PGS-IN-1 exhibits potent antiinflammatrory and PGS inhibitory activity (IC $_{50}$ =0.28 μ M). PGS-IN-1 also shows potent inhibitory activity against 5-lipoxygenase (IC $_{50}$ =1.05 μ M)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay ^[1]	PGS-IN-1 is dissolved in ethanol and the final concentration of ethanol is kept at 2% in each assay. The reaction mixture includes reaction buffer, enzyme (20 μ g protein), and PGS-IN-1 in a total volume of 0.2 mL. The mixture is incubated for 15 min at 37°C with shaking and terminated by the addition of 2.5 mL ethyl acetate and 25 μ L 1 N formic acid ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration ^[1]	Rats: PGS-IN-1 is administered orally to groups of 4-6 male Wistar rats weighting 160-220 g. One hour later, 1 % carrageenin in 0.9 % NaCl is injected subcutaneously into a hind paw. Paw volumes are measured 5 h after the injection ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Katsumi I, et al. Studies on styrene derivatives. I. Synthesis and antiinflammatory activities of alpha-benzylidene-gamma-butyrolactone derivatives. Chem Pharm Bull (Tokyo). 1986 Jan;34(1):121-9.

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$

Tel: 609-228-6898 Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA

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