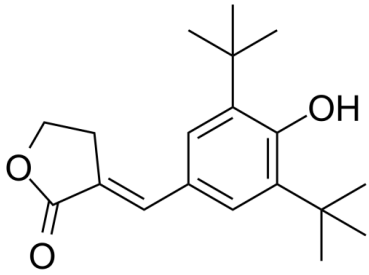
Data Sheet

Product Name:	PGS-IN-1
Cat. No.:	CS-7145
CAS No.:	102271-49-8
Molecular Formula:	$C_{19}H_{26}O_3$
Molecular Weight:	302.41
Target:	Lipoxygenase; PGE synthase
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

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. IC50 & Target: IC50: 0.28 μM (PGS), 1.05 μM (5-lipoxygenase)[1] **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 μM). PGS-IN-1 also shows potent inhibitory activity against 5-lipoxygenase (IC_{50}=1.05 μM)[1].

PROTOCOL (Extracted from published papers and Only for reference)

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 μg 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 μL 1 N formic acid[1]. **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].

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.

CAIndexNames:

2(3H)-Furanone, 3-[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methylene]dihydro-, (E)-

SMILES:

O=C1OCC/C1=C\C2=CC(C(C)(C)C)=C(O)C(C(C)(C)C)=C2

Caution: Product has not been fully validated for medical applications. For research use only.

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