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**Product Data Sheet**


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Product Name: ONO-8130

Cat. No.: GC14211

**Chemical Properties**

Cas. No. 459841-96-4

Chemical Name 4-[[[2,3-dihydro-6-[(2-methylpropyl)[(4-methyl-2-thiazolyl)sulfonyl]amino]-1H-inden-5-yl]oxy]methyl]-benzoic acid

SMILES OC(C1=CC=C(COC2=CC(CCC3)=C3C=C2N(S(C4=NC(C)=CS4)(=O)=O)CC(C)C)C=C1)=O

Formula  $C_{25}H_{28}N_2O_5S_2$  M.Wt 500.6

Solubility  $\leq 2\text{mg/ml}$  in ethanol;  $3\text{mg/ml}$  in DMSO;  $1\text{mg/ml}$  in dimethyl formamide Storage Store at  $-20^\circ\text{C}$

General tips For obtaining a higher solubility, please warm the tube at  $37^\circ\text{C}$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^\circ\text{C}$  for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

ONO-8130 is an orally bioavailable and selective antagonist of the prostaglandin E2 (PGE2) receptor EP1 with  $K_i$  value of  $1.9\text{ nM}$  [1][2][3].

Prostaglandins contribute to the sensitization of peripheral and central nociceptive neurons during peripheral inflammation. Prostaglandin E2 (PGE2) is considered a dominant pronociceptive prostanoid. PGE2 receptors are G protein-coupled receptors and classified into 4 general subtypes (EP1, EP2, EP3, and EP4) that are located unevenly in different tissues. EP1 receptors play a major role in processing of pain [1].

In cystitis-related bladder pain mice, Oral preadministration of ONO-8130 at  $0.3\text{-}30\text{ mg/kg}$  strongly prevented both the bladder pain-like behavior and referred hyperalgesia in a dose-dependent way. ONO-8130 at  $30\text{ mg/kg}$  also reversed the established cystitis-related bladder pain. ONO-8130 also blocked prostaglandin E2 caused prompt

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

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phosphorylation of ERK in the L6 spinal cord [1]. In the guinea pig trachea (GPT), ONO-8130 inhibited the initial contraction mediated by PGE2. ONO-8130 also eliminated the spontaneous tone [2].

### References:

- [1]. Miki T, Matsunami M, Nakamura S, et al. ONO-8130, a selective prostanoid EP1 receptor antagonist, relieves bladder pain in mice with cyclophosphamide-induced cystitis. *Pain*. 2011 Jun;152(6):1373-81.
- [2]. Sfhholm J, Dahlén SE, Adner M. Antagonising EP1 and EP2 receptors reveal that the TP receptor mediates a component of antigen-induced contraction of the guinea pig trachea. *Eur J Pharmacol*. 2013 Oct 15;718(1-3):277-82.

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