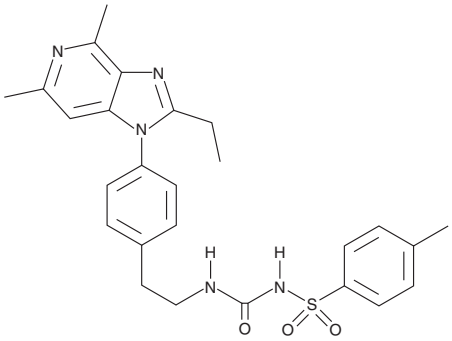
PRODUCT INFORMATION

CJ-023423

Item No. 10010355

CAS Registry No.: 415903-37-6
Formal Name: N-[[2,4-(2-ethyl-4,6-dimethyl-1H-imidazo[4,5-c]pyridin-1-yl) phenylethylamino]carbonyl]-4-methyl-benzenesulfonamide
Synonyms: Grapiprant, RQ-00000007
MF: $C_{26}H_{29}N_5O_3S$
FW: 491.6
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

CJ-023423 is supplied as a crystalline solid. A stock solution may be made by dissolving the CJ-023423 in the solvent of choice, which should be purged with an inert gas. CJ-023423 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CJ-023423 in ethanol and DMSO is approximately 10 mg/ml and approximately 20 mg/ml in DMF.

CJ-023423 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CJ-023423 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CJ-023423 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Prostaglandin E_2 (PGE_2) activates four E prostanoid (EP) receptors, $EP_{1\text{-}4}$. EP_4 is a G_s protein-coupled receptor that, by elevating the second messenger cAMP, plays important roles in bone formation and resorption, cancer, and atherosclerosis.[1-3] CJ-023423 is a potent and selective antagonist of the EP_4 receptor (K_i = 13 and 20 nM for human and rat EP_4, respectively).[4,5] It inhibits PGE_2-evoked elevation in intracellular cAMP in cells and, *in vivo*, reduces thermal hyperalgesia induced by intraplantar injection of PGE_2.[5] CJ-023423 reduces acute and chronic inflammatory pain in different mouse models.[5]

References

1. Babaev, V.R., Chew, J.D., Ding, L., *et al.* Macrophage EP4 deficiency increases apoptosis and suppresses early atherosclerosis. *Cell Metab.* **8(6)**, 492-501 (2008).
2. Li, M., Thompson, D.D., and Paralkar, V.M. Prostaglandin E_2 receptors in bone formation. *Int. Orthop.* **31(6)**, 767-772 (2007).
3. Hawcroft, G., Ko, C.W.S., and Hull, M.A. Prostaglandin E_2-EP4 receptor signalling promotes tumorigenic behaviour of HT-29 human colorectal cancer cells. *Oncogene* **26(21)**, 3006-3019 (2007).
4. Nakao, K., Murase, A., Ohshiro, H., *et al.* CJ-023,423, a novel, potent and selective prostaglandin EP4 receptor antagonist with antihyperalgesic properties. *J. Pharmacol. Exp. Ther.* **322(2)**, 686-694 (2007).
5. Jones, R.L., Giembycz, M.A., and Woodward, D.F. Prostanoid receptor antagonists: Development strategies and therapeutic applications. *Br. J. Pharmacol.* **158(1)**, 104-145 (2009).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM