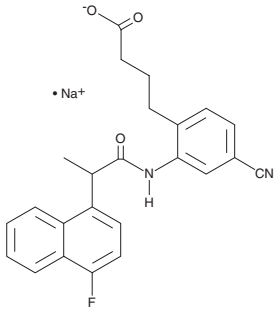
PRODUCT INFORMATION

ONO-AE3-208 (sodium salt)

Item No. 16108

CAS Registry No.: 2309931-05-1
Formal Name: 4-cyano-2-[[2-(4-fluoro-1-naphthalenyl)-1-oxopropyl]amino]-benzenebutanoic acid, monosodium salt
MF: $C_{24}H_{20}FN_2O_3 \bullet Na$
FW: 426.4
Purity: ≥95%
UV/Vis.: λ_{max}: 223, 285 nm
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

ONO-AE3-208 (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the ONO-AE3-208 (sodium salt) in the solvent of choice, which should be purged with an inert gas. ONO-AE3-208 (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ONO-AE3-208 (sodium salt) in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ONO-AE3-208 (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ONO-AE3-208 (sodium salt) in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ONO-AE3-208 is an antagonist of the EP_4 receptor (K_i = 1.3 nM) that less potently affects EP_3, FP, and TP receptors (K_is = 30, 790, and 2,400 nM, respectively) and is without effect on other prostanoid receptors.[1,2] In wild type mice, it mimics deletion of EP_4 by producing severe colitis, with epithelial loss, crypt damage, and inflammation, after treatment with 3% dextran sodium sulfate.[1] ONO-AE3-208 has also been used to implicate EP_4 signaling in immune and autoimmune responses, inflammation, and cancer.[3-6]

References

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2. 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).
3. Ma, X., Kundu, N., Rifat, S., *et al.* Prostaglandin E receptor EP4 antagonism inhibits breast cancer metastasis. *Cancer Res.* **66(6)**, 2923-2927 (2006).
4. Kabashima, K., Sakata, D., Nagamachi, M., *et al.* Prostaglandin E_2-EP4 signaling initiates skin immune responses by promoting migration and maturation of Langerhans cells. *Nat. Med.* **9(6)**, 744-749 (2003).
5. Esaki, Y., Li, Y., Sakata, D., *et al.* Dual roles of PGE_2-EP4 signaling in mouse experimental autoimmune encephalomyelitis. *Proc. Natl. Acad. Sci. USA* **107(27)**, 12233-12238 (2010).
6. Komatsu, H., Enjouji, S., Ito, A., *et al.* Prostaglandin E_2 inhibits proteinase-activated receptor 2-signal transduction through regulation of receptor internalization. *J. Vet. Med. Sci.* **75(3)**, 255-261 (2013).

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