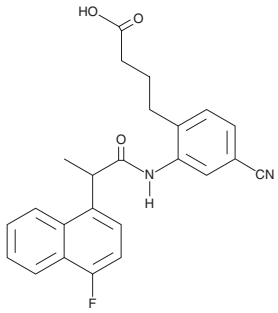
PRODUCT INFORMATION

ONO-AE3-208

Item No. 14522

CAS Registry No.:	402473-54-5
Formal Name:	4-cyano-2-[[2-(4-fluoro-1-naphthalenyl)-1-oxopropyl]amino]-benzenebutanoic acid
MF:	$C_{24}H_{21}FN_2O_3$
FW:	404.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 223, 286 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 is supplied as a crystalline solid. A stock solution may be made by dissolving the ONO-AE3-208 in the solvent of choice, which should be purged with an inert gas. ONO-AE3-208 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ONO-AE3-208 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

ONO-AE3-208 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ONO-AE3-208 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ONO-AE3-208 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. 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) which 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 EP4 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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