

PRODUCT INFORMATION

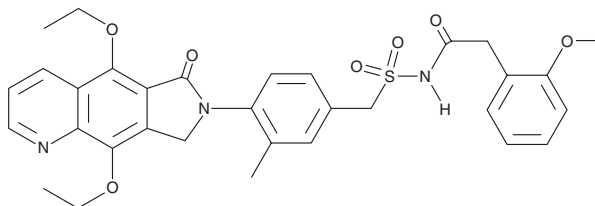


MF498

Item No. 15973

CAS Registry No.: 915191-42-3
Formal Name: N-[[[4-(5,9-diethoxy-6,8-dihydro-6-oxo-7H-pyrrolo[3,4-g]quinolin-7-yl)-3-methylphenyl]methyl]sulfonyl]-2-methoxybenzeneacetamide

MF: C₃₂H₃₃N₃O₇S
FW: 603.7
Purity: ≥98%
UV/Vis.: λ_{max}: 204, 255 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

MF498 is supplied as a crystalline solid. A stock solution may be made by dissolving the MF498 in the solvent of choice. MF498 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of MF498 in these solvents is approximately 10 mg/ml.

MF498 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MF498 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MF498 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

Prostaglandin E₂ (PGE₂; Item No. 14010) activates four E prostanoid (EP) receptors, EP₁₋₄. EP₄ is a Gs protein-coupled receptor that, by elevating the second messenger cAMP, plays important roles in bone formation and resorption, inflammation, cancer, and atherosclerosis.¹⁻³ MF498 is a selective EP₄ receptor antagonist (K_i = 0.7 nM versus a K_i > 1 μM for other EP receptors).⁴ In HEK293 cells expressing the human EP₄ receptor, MF498 inhibits EP ligand induced activity with an IC₅₀ value of 1.7 nM.⁴ In various animal models for arthritis, MF498 has been shown to inhibit inflammation without gastrointestinal toxicity (ED₅₀ values as low as 0.02 mg/kg/day).⁴

References

- Li, M., Thompson, D.D., and Paralkar, V.M. Prostaglandin E₂ receptors in bone formation. *Int. Orthop.* **31(6)**, 767-772 (2007).
- Hawcroft, G., Ko, C.W.S., and Hull, M.A. Prostaglandin E₂-EP₄ receptor signalling promotes tumorigenic behaviour of HT-29 human colorectal cancer cells. *Oncogene* **26(21)**, 3006-3019 (2007).
- 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).
- Clark, P., Rowland, S.E., Denis, D., et al. MF498 [N-[[[4-(5,9-diethoxy-6-oxo-6,8-dihydro-7H-pyrrolo[3,4-g]quinolin-7-yl)-3-methylbenzyl]sulfonyl]-2-(2-methoxyphenyl)acetamide], a selective E prostanoid receptor 4 antagonist, relieves joint inflammation and pain in rodent models of rheumatoid and osteoarthritis. *J. Pharmacol. Exp. Ther.* **325(2)**, 425-434 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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