

PRODUCT INFORMATION



W-54011

Item No. 21231

CAS Registry No.: 405098-33-1
Formal Name: N-[[4-(dimethylamino)phenyl]methyl]-1,2,3,4-tetrahydro-7-methoxy-N-[4-(1-methylethyl)phenyl]-1-naphthalenecarboxamide, monohydrochloride

MF: C₃₀H₃₆N₂O₂ • HCl

FW: 493.1

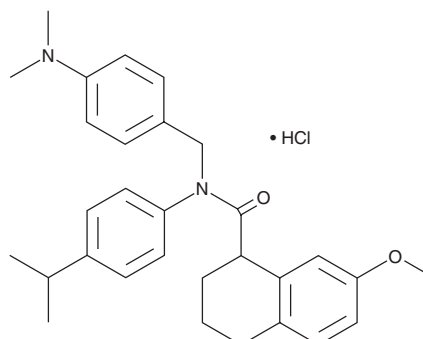
Purity: ≥98%

UV/Vis.: λ_{max}: 263 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

W-54011 is supplied as a crystalline solid. A stock solution may be made by dissolving the W-54011 in the solvent of choice, which should be purged with an inert gas. W-54011 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of W-54011 in ethanol is approximately 3 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

W-54011 is an orally bioavailable, nonpeptide antagonist of complement component 5a receptor 1 (C5aR), also known as cluster of differentiation 88 (CD88).¹ W-54011 inhibits ¹²⁵I-rhC5a binding in neutrophils (K_i = 2.2 nM) and C5a-mediated intracellular Ca²⁺ mobilization (IC₅₀ = 3.1 nM).¹ W-54011 is selective and does not affect Ca²⁺ mobilization mediated by other G protein-coupled receptor (GPCR) ligands, N-Formyl-Met-Leu-Phe (fMLF; Item No. 21495) or IL-8 up to a concentration of 10 μM.¹ It inhibits Ca²⁺ mobilization in neutrophils in humans, cynomolgus monkeys, and gerbils, but not in mice, rats, guinea pigs, rabbits, or dogs.¹ At 10 nM, W-54011 also inhibits C5a-mediated migration and vessel formation of human microvascular endothelial cells (HMEC-1).²

References

1. Sumichika, H., Sakata, K., Sato, N., *et al.* Identification of a potent and orally active non-peptide C5a receptor antagonist. *J. Biol. Chem.* **277**(51), 49403-49407 (2002).
2. Kurihara, R., Yamamoka, K., Sawamukai, N., *et al.* C5a promotes migration, proliferation, and vessel formation in endothelial cells. *Inflamm. Res.* **59**(8), 659-666 (2010).

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.

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