

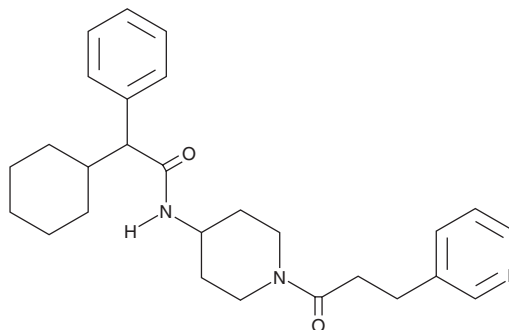
PRODUCT INFORMATION



C3a Receptor Agonist

Item No. 21683

CAS Registry No.: 944997-60-8
Formal Name: α -cyclohexyl-N-[1-[1-oxo-3-(3-pyridinyl)propyl]-4-piperidinyl]-benzeneacetamide
MF: C₂₇H₃₅N₃O₂
FW: 433.6
Purity: \geq 98%
UV/Vis.: λ_{max} : 262 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

C3a receptor agonist is supplied as a crystalline solid. A stock solution may be made by dissolving the C3a receptor agonist in the solvent of choice, which should be purged with an inert gas. C3a receptor agonist is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of C3a receptor agonist in these solvents is approximately 30 mg/ml.

C3a receptor agonist is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, C3a receptor agonist should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. C3a receptor agonist has a solubility of approximately 0.125 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Complement 3a (C3a) receptor agonist binds the G protein-coupled C3a receptors (C3aRs) in the immune system complement pathway.¹ Activation of C3aR prevents neutrophils from being mobilized in a model of intestinal ischemia-reperfusion injury.² C3aRs are expressed on neural progenitor cells and immature neurons in adult mice. C3a stimulates differentiation of neural progenitor cells *in vitro*.^{3,4}

References

1. Klos, A., Wende, E., Wareham, K.J., *et al.* International union of basic and clinical pharmacology. LXXXVII. Complement peptide C5a, C4a, and C3a receptors. *Pharmacol. Rev.* **65**(1), 500-543 (2013).
2. Wu, M.C.L., Brennan, F.H., Lynch, J.P.L., *et al.* The receptor for complement component C3a mediates protection from intestinal ischemia-reperfusion injuries by inhibiting neutrophil mobilization. *Proc. Natl. Acad. Sci. USA* **110**(23), 9439-9444 (2013).
3. Rahpaymai, Y., Hietala, M.A., Wilhelmsson, U., *et al.* Complement: A novel factor in basal and ischemia-induced neurogenesis. *EMBO J.* **25**(6), 1364-1374 (2006).
4. Shinjyo, N., Ståhlberg, A., Dracunow, M., *et al.* Complement-derived anaphylatoxin C3a regulates *in vitro* differentiation and migration of neural progenitor cells. *Stem Cells* **27**(11), 2824-2832 (2009).

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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