

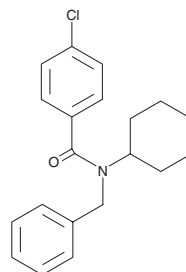
PRODUCT INFORMATION



FPS-ZM1

Item No. 11909

CAS Registry No.: 945714-67-0
Formal Name: 4-chloro-N-cyclohexyl-N-(phenylmethyl)-benzamide
MF: C₂₀H₂₂ClNO
FW: 327.9
Purity: ≥98%
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

FPS-ZM1 is supplied as a crystalline solid. A stock solution may be made by dissolving the FPS-ZM1 in the solvent of choice, which should be purged with an inert gas. FPS-ZM1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of FPS-ZM1 in these solvents is approximately 15, 25, and 30 mg/ml, respectively.

FPS-ZM1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FPS-ZM1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. FPS-ZM1 has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

FPS-ZM1 is a high-affinity inhibitor of the receptor for advanced glycation end products (RAGE; $K_i = 25$ nM).¹ It blocks the binding of amyloid β (A β) protein to RAGE and inhibits A β 40- and A β 42-induced cellular stress in RAGE-expressing cells.¹ FPS-ZM1 is functional in mice when administered intraperitoneally and penetrates the blood-brain barrier (BBB), inhibiting β -secretase activity, A β production, microglia activation, and neuroinflammation.^{1,2} FPS-ZM1 is used to elucidate the role of RAGE-mediated signaling in diverse physiological processes *in vivo*, including cancer tumor growth, angiogenesis, and metastasis, as well as BBB damage, edema, and inflammation after intracerebral hemorrhage.^{3,4}

References

1. Deane, R., Singh, I., Sagare, A.P., *et al.* A multimodal RAGE-specific inhibitor reduces amyloid β -mediated brain disorder in a mouse model of Alzheimer disease. *J. Clin. Invest.* **122**(4), 1377-1392 (2012).
2. Hong, Y., Shen, C., Yin, Q., *et al.* Effects of RAGE-specific inhibitor FPS-ZM1 on amyloid- β metabolism and AGEs-induced inflammation and oxidative stress in rat hippocampus. *Neurochem. Res.* **41**(5), 1192-1199 (2016).
3. Kwak, T., Drews-Elger, K., Ergonul, A., *et al.* Targeting of RAGE-ligand signaling impairs breast cancer cell invasion and metastasis. *Oncogene* **36**(11), 1559-1572 (2016).
4. Yang, F., Wang, Z., Zhang, J.H., *et al.* Receptor for advanced glycation end-product antagonist reduces blood-brain barrier damage after intracerebral hemorrhage. *Stroke* **46**(5), 1328-1336 (2015).

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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