

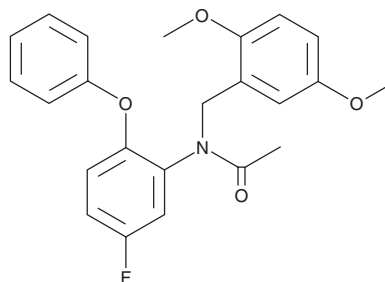
PRODUCT INFORMATION



DAA1106

Item No. 23454

CAS Registry No.: 220551-92-8
Formal Name: N-[(2,5-dimethoxyphenyl)methyl]-N-(5-fluoro-2-phenoxyphenyl)-acetamide
MF: C₂₃H₂₂FNO₄
FW: 395.4
Purity: ≥98%
UV/Vis.: λ_{max}: 287 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

DAA1106 is supplied as a crystalline solid. A stock solution may be made by dissolving the DAA1106 in the solvent of choice, which should be purged with an inert gas. DAA1106 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of DAA1106 in these solvents is approximately 12.5 and 30 mg/ml, respectively.

Description

DAA1106 is an agonist of the 18 kDa translocator protein TSPO, which was previously known as the peripheral benzodiazepine receptor (PBR), that has an IC₅₀ value of 0.28 nM in a radioligand binding assay.¹ It is selective for TSPO over central benzodiazepine receptors (CBRs) and GABA_A receptors in rat whole brain membranes, as well as a panel of 54 ion channels, uptake/transporters, and secondary messenger receptors at concentrations greater than 10 μM. DAA1106 increases mitochondrial pregnenolone formation in rat brain homogenates, which indirectly potentiates GABA_A receptor signaling. DAA1106 (1-10 mg/kg) increases the time mice spend in the light area of the light/dark exploration and the time rats spend in open arms of the elevated plus maze in a dose-dependent manner, suggesting a decrease in anxiety-like behavior. Various radiolabeled versions of DAA1106 have been synthesized to study the distribution of PBRs in neurological disease models using positron emission tomography (PET).^{2,3}

References

1. Okuyama, S., Chaki, S., Yoshikawa, R., *et al.* Neuropharmacological profile of peripheral benzodiazepine receptor agonists, DAA1097 and DAA1106. *Life Sci.* **64(16)**, 1455-1464 (1999).
2. Zhang, M.-R., Kida, T., Noguchi, J., *et al.* [¹¹C]DAA1106: radiosynthesis and *in vivo* binding to peripheral benzodiazepine receptors in mouse brain. *Nucl. Med. Biol.* **30(5)**, 513-519 (2003).
3. Venneti, S., Wagner, A.K., Wang, G., *et al.* The high affinity peripheral benzodiazepine receptor ligand DAA1106 binds specifically to microglia in a rat model of traumatic brain injury: Implications for PET imaging. *Exp. Neurol.* **207(1)**, 118-127 (2007).

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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