

Product Name: MOMBA

Catalog No.: 7926

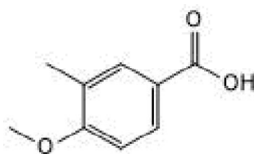
Batch No.: 2

CAS Number: 6880-04-2

IUPAC Name: 4-Methoxy-3-methylbenzoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₁₀O₃
Batch Molecular Weight: 166.17
Physical Appearance: Off-white solid
Solubility: DMSO to 100 mM
ethanol to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.05	6.07	0
Found	65.12	5.98	0.1

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: 4-Methoxy-3-methylbenzoic acid

Description:

MOMBA is a selective orthosteric agonist for human free fatty acid 2 (hFFA2) engineered receptors, designer receptors activated by designer drugs (DREADD), it shows no activity to wild-type hFFA2, hFFA3, and mouse FFA2. MOMBA inhibit forskolin-stimulated cAMP levels in cells expressing the hFFA2-DREADD receptor with improved potency and equivalent efficacy to Sorbic acid (Cat. No. 7119). In hFFA2-DREADD transgenic mice, MOMBA treatment significantly reduces gut transit and promotes concentration-dependent release of GLP-1 from colonic crypts. Orally bioavailable.

Physical and Chemical Properties:

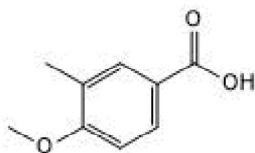
Batch Molecular Formula: C₉H₁₀O₃

Batch Molecular Weight: 166.17

Physical Appearance: Off-white solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Barki et al (2022) Chemogenetics defines a short-chain fatty acid receptor gut-brain axis. *Elife* **11** e73777. PMID: 35229717.

Miura et al (2022) Chemogenetics of cell surface receptors: beyond genetic and pharmacological approaches. *RSC Chem.Biol.* **3** 269. PMID: 35359495.

Milligan et al (2021) Chemogenetic approaches to explore the functions of free fatty acid receptor 2. *Trends Pharmacol.Sci.* **42** 191. PMID: 33495026.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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