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DATASHEET

MOMBA

Product overview

Name	MOMBA
Cat No	HB7626
Biological action	Agonist
Purity	>98%
Description	Newly identified, highly selective FFA2-DREADD agonist

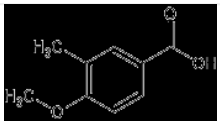
Biological Data

Biological description	Newly identified, highly selective FFA2-DREADD agonist which acts as a selective orthostatic agonist at the engineered hFFA2 (human free fatty acid2)-DREADD receptor and shows no activity at wild-type hFFA2, hFFA3 or mouse FFA2 receptors. Displays improved potency and comparable efficacy to the alternative hFFA2-DREADD activator sorbic acid in hFFA2-DREADD transgenic mice. In cells expressing the hFFA2-DREADD receptor, MOMBA inhibits forskolin-induced cAMP levels, reduces gut transit and induces a FFA2 specific concentration dependent release of GLP-in colonic crypts and GLP-1 and PYY secretion in intact colon. Active in vivo and orally bioavailable.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in DMSO (100 mM), and in ethanol (100 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	4-Methoxy-3-methylbenzoic acid
Molecular Weight	166.2
Chemical structure	
Molecular Formula	$C_9H_{10}O_3$
CAS Number	6880-04-2
PubChem identifier	2759583
SMILES	CC1=C(C=CC(=C1)C(=O)O)OC
InChi	InChI=1S/C9H10O3/c1-6-5-7(9(10)11)3-4-8(6)12-2/h3-5H,1-2H3,(H,10,11)
InChiKey	DNMUMZLKDOZMEY-UHFFFAOYSA-N
MDL number	MFCD00270114

References

Chemogenetics defines a short-chain fatty acid receptor gut-brain axis.

Barki N et al (2022) eLife 11

PubMedID 35229717

Chemogenetics of cell surface receptors: beyond genetic and pharmacological approaches.

Miura Y et al (2022) RSC chemical biology 3

PubMedID 35359495

P273 Chemogenetic analysis of how receptors for short chain fatty acids regulate the gut-brain axis

Barki et al (2020) BMJ Gut - Posters nutrition 70