

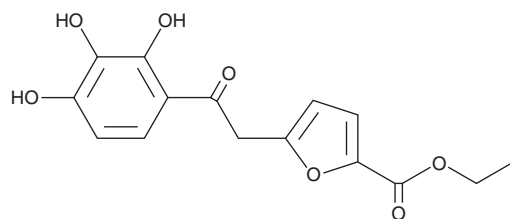
PRODUCT INFORMATION



MMG-11

Item No. 38787

CAS Registry No.: 313254-94-3
Formal Name: 5-[2-oxo-2-(2,3,4-trihydroxyphenyl)ethyl]-2-furancarboxylic acid
MF: $C_{15}H_{14}O_7$
FW: 306.3
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 216, 245, 263, 299 nm
Supplied as: A 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

MMG-11 is supplied as a solid. A stock solution may be made by dissolving the MMG-11 in the solvent of choice, which should be purged with an inert gas. MMG-11 is soluble in DMSO and ethanol.

Description

MMG-11 is an antagonist of the toll-like receptor 1/2 (TLR1/2) heterodimer ($IC_{50} = 0.9 \mu\text{M}$ in HEK-Blue cells expressing the human receptors).¹ It is selective for TLR1/2 over the TLR2/6 heterodimer ($IC_{50} = 7.4 \mu\text{M}$ in HEK-Blue cells expressing the human receptors). MMG-11 inhibits TNF- α and IL-6 cytokine secretion induced by the bacterial lipopeptide agonist of TLR2, Pam₃CKs₄ (Item No. 24126), in RAW 264.7 macrophages (IC_{50} s = 3.3 and 0.2 μM , respectively). It increases serotonin transporter (SERT) and glutathione (GSH) activity, as well as decreases lactate dehydrogenase (LDH) activity and malondialdehyde (MDA) levels, in *M. avium*-infected Caco-2 cells when used at a concentration of 5 ng/ml.²

References

1. Grabowski, M., Murgueitio, M.S., Bermudez, M., *et al.* The novel small-molecule antagonist MMG-11 preferentially inhibits TLR2/1 signaling. *Biochem. Pharmacol.* **171**, 113687 (2020).
2. Qasem, A., Naser, A.E., and Naser, S.A. Enteropathogenic infections modulate intestinal serotonin transporter (SERT) function by activating Toll-like receptor 2 (TLR-2) in Crohn's disease. *Sci. Rep.* **11**(1), 22624 (2021).

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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