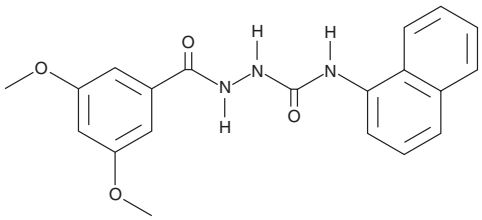
PRODUCT INFORMATION

TC-O 9311

Item No. 14030

CAS Registry No.:	444932-31-4
Formal Name:	3,5-dimethoxy-benzoic acid, 2-[(1-naphthalenylamino)carbonyl]hydrazide
MF:	$C_{20}H_{19}N_3O_4$
FW:	365.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 221, 293 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

TC-O 9311 is supplied as a crystalline solid. A stock solution may be made by dissolving the TC-O 9311 in the solvent of choice, which should be purged with an inert gas. TC-O 9311 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of TC-O 9311 in ethanol and DMF is approximately 14 mg/ml and approximately 11 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of TC-O 9311 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TC-O 9311 in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TC-O 9311 is an agonist of the orphan G protein-coupled receptor GPR139 (EC_{50} = 39 nM in a calcium mobilization assay).[1] It is selective for GPR139 over a panel of 90 additional targets. TC-O 9311 (1 µM) inhibits cell death induced by 1-methyl-4-phenylpyridinium (MPP^+), but not 6-hydroxydopamine (6-OHDA; Item No. 25330), in primary dopaminergic midbrain neurons.[2]

References

1. Shi, F., Shen, J.K., Chen, D., *et al.* Discovery and SAR of a series of agonists at orphan G protein-coupled receptor 139. *ACS Med. Chem. Lett.* **2(4)**, 303-306 (2011).
2. Bayer Andersen, K., Leander Johansen, J., Hentzer, M., *et al.* Protection of primary dopaminergic midbrain neurons by GPR139 agonists supports different mechanisms of MPP^+ and rotenone toxicity. *Front. Cell. Neurosci.* **10:164** (2016).

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