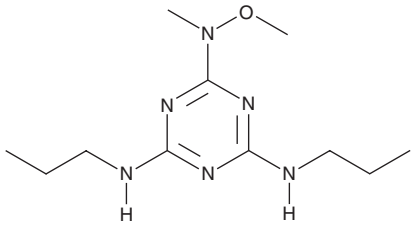
PRODUCT INFORMATION

GAL-021

Item No. 22609

CAS Registry No.:	1380341-99-0
Formal Name:	N^2-methoxy-N^2-methyl-N^4,N^6-dipropyl-1,3,5-triazine-2,4,6-triamine
MF:	$C_{11}H_{22}N_6O$
FW:	254.3
Purity:	≥95%
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

GAL-021 is supplied as a crystalline solid. A stock solution may be made by dissolving the GAL-021 in the solvent of choice, which should be purged with an inert gas. GAL-021 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of GAL-021 in these solvents is approximately 5 and 3 mg/ml, respectively. GAL-021 is slightly soluble in ethanol.

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 GAL-021 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of GAL-021 in PBS (pH 7.2) is approximately 0.30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

GAL-021 is a large-conductance Ca^{2+}-activated potassium channel (BK_{Ca}/K_{Ca}1.1) blocker.[1] It inhibits BK_{Ca} single-channel activity in GH3 cells in a concentration-dependent manner when used at concentrations ranging from 1 to 10 µM. GAL-021 increases respiratory product minute volume in wild-type rats and mice (ED_{50}s = 0.1 and 0.5 mg/kg) but not mice with bilaterally transected carotid sinus nerves or *Slo*$^{-/-}$ mice that lack the pore-forming α-subunit of BK_{Ca}. It reverses morphine-induced respiratory depression in rats and cynomolgus monkeys. GAL-021 also potentiates morphine-induced analgesia in a tail-flick assay in rats.

Reference

1. Golder, F.J., Dax, S.L., Baby, S.M., *et al.* Identification and characterization of GAL-021 as a novel breathing control modulator. *Anesthesiology* **123(5)**, 1093-1104 (2015).

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