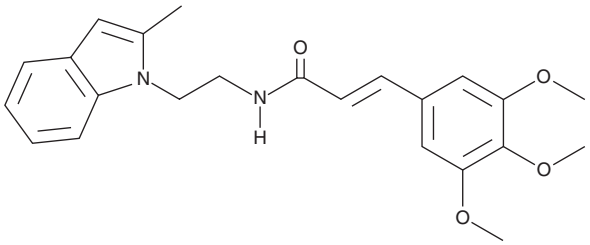
PRODUCT INFORMATION

TG4-155

Item No. 17639

CAS Registry No.:	1164462-05-8
Formal Name:	(2E)-N-[2-(2-methyl-1H-indol-1-yl) ethyl]-3-(3,4,5-trimethoxyphenyl)-2-propenamide
MF:	$C_{23}H_{26}N_2O_4$
FW:	394.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 225, 292 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

TG4-155 is supplied as a crystalline solid. A stock solution may be made by dissolving the TG4-155 in the solvent of choice, which should be purged with an inert gas. TG4-155 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of TG4-155 in these solvents is approximately 5, 30, and 50 mg/ml, respectively.

Description

Prostaglandin E_2 (PGE_2) evokes distinct responses through four different 'E prostanoid' (EP) receptors. EP_2 is a G protein-coupled receptor that has diverse roles, including those in cancer, inflammation, and neuroprotection.[1-3] TG4-155 is a brain penetrant EP_2 antagonist (K_B = 2.4 nM) that is over 1000-fold less effective at EP_4 (K_B = 11.4 µM) and a panel of other receptors and channels.[4,5] It blocks the induced expression of inflammatory markers in microglial cells treated with the selective EP_2 agonist butaprost (Item No. 13740) alone or with LPS and IFNγ.[4,6] TG4-155 significantly reduces neurodegeneration in a mouse model of status epilepticus, induced by pilocarpine (Item No. 14487).[4] It inhibits proliferation, invasion, and inflammatory cytokine expression in cancer cells treated with butaprost.[5]

References

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2. Jiang, J. and Dingledine, R. Prostaglandin receptor EP2 in the crosshairs of anti-inflammation, anti-cancer, and neuroprotection. *Trends Pharmacol. Sci.* **34(7)**, 413-423 (2013).
3. Kawahara, K., Hohjoh, H., Inazumi, T., *et al.* Prostaglandin E_2-induced inflammation: Relevance of prostaglandin E receptors. *Biochim. Biophys. Acta* **1851(4)**, 414-421 (2015).
4. Jiang, J., Ganesh, T., Du, Y., *et al.* Small molecule antagonist reveals seizure-induced mediation of neuronal injury by prostaglandin E2 receptor subtype EP2. *Proc. Natl. Acad. Sci. USA* **109(8)**, 3149-3154 (2012).
5. Jiang, J. and Dingledine, R. Role of prostaglandin receptor EP2 in the regulations of cancer cell proliferation, invasion, and inflammation. *J. Pharmacol. Exp. Ther.* **344(2)**, 360-367 (2013).
6. Quan, Y., Jiang, J., and Dingledine, R. EP2 receptor signaling pathways regulate classical activation of microglia. *J. Biol. Chem.* **288(13)**, 9293-9302 (2013).

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