

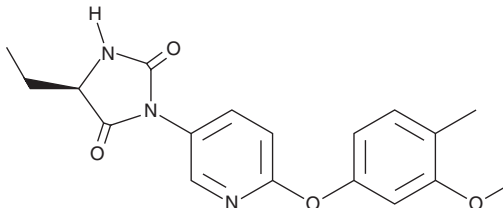
PRODUCT INFORMATION



AUT1

Item No. 28599

CAS Registry No.: 1311136-84-1
Formal Name: 5R-ethyl-3-[6-(3-methoxy-4-methylphenoxy)-3-pyridinyl]-2,4-imidazolidinedione
MF: C₁₈H₁₉N₃O₄
FW: 341.4
Purity: ≥98%
UV/Vis.: λ_{max}: 277 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

AUT1 is supplied as a crystalline solid. A stock solution may be made by dissolving the AUT1 in the solvent of choice, which should be purged with an inert gas. AUT1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AUT1 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

AUT1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AUT1 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AUT1 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

AUT1 is a positive modulator of the voltage-gated potassium channel subtypes K_v3.1b, K_v3.2a, and K_v3.3 (EC₅₀s = 4.7, 4.9, and 31.6 μM, respectively, in a patch-clamp assay).¹ It is selective for K_v3.1b, K_v3.2a, and K_v3.3 over K_v1.5 and K_v7.1/minK channels but also inhibits the serotonin (5-HT) transporter, 5-HT₃ receptor, and α1 subunit-containing nicotinic acetylcholine receptor (nAChR) in a panel of 26 ion channels, receptors, and transporters. AUT1 increases tetraethylammonium-induced decreases in the firing frequency and amplitude of action potentials in mouse somatosensory cortex slices when used at concentrations of 1 and 10 μM.

Reference

1. Rosato-Siri, M.D., Zambello, E., Mutinelli, C., *et al.* A novel modulator of Kv3 potassium channels regulates the firing of parvalbumin-positive cortical interneurons. *J. Pharmacol. Exp. Ther.* **354**(3), 251-260 (2015).

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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