

## Product Data Sheet

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Product Name: AUT1  
Cat. No.: GC19480

### Chemical Properties

Cas. No. 1311136-84-1

Chemical Name (5R)-5-ethyl-3-(6-{[4-methyl-3-(methoxy)phenyl]oxy}-3-pyridinyl)-2,4-imidazolidinedione

SMILES O=C1N(C2=CC=C(OC3=CC=C(C)C(OC)=C3)N=C2)C([C@@H](CC)N1)=O

Formula  $C_{18}H_{19}N_3O_4$  M.Wt 341.367

Solubility DMSO :  $\geq 250$  mg/mL (732.36 mM) Storage Store at  $-20^{\circ}\text{C}$

General tips For obtaining a higher solubility, please warm the tube at  $37^{\circ}\text{C}$  and shake it in the ultrasonic bath for a while. Stock solution can be stored below  $-20^{\circ}\text{C}$  for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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### Structure



### Background

AUT1 (AUT-1) is a novel specific, cell permeant modulator of Kv3 channels with EC<sub>50</sub> of 4.7 and 4.9  $\mu$ M for Kv3.1b and Kv3.2a, respectively; displays approximately 10-fold lower potency for Kv3.3 channels, and does not interact with a wide range of ion channels, receptors, and transporters; increases hKv3.1b and hKv3.2a currents by  $1049 \pm 198\%$  and  $226 \pm 39\%$ , respectively, at 30  $\mu$ M; rescue the fast firing capability of FS interneurons following a reduction in Kv3 channel availability, has the potential to rescue normal function and therapeutic benefit in disorders like schizophrenia or age-related cognitive decline.

### Reference:

[1]. Rosato-Siri MD, et al. J Pharmacol Exp Ther. 2015 Sep;354(3):251-60.

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[2]. Brown MR, et al. J Neurophysiol. 2016 Jul 1;116(1):106-21.

[3]. Parekh PK, et al. Neuropsychopharmacology. 2018 Jan;43(2):435-444.

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