

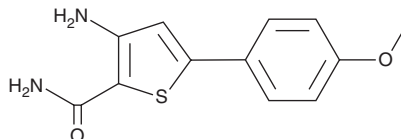
PRODUCT INFORMATION



AA43279

Item No. 40428

CAS Registry No.: 354812-16-1
Formal Name: 3-amino-5-(4-methoxyphenyl)-2-thiophenecarboxamide
MF: $C_{12}H_{12}N_2O_2S$
FW: 248.3
Purity: $\geq 98\%$
Supplied as: A 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

AA43279 is supplied as a solid. A stock solution may be made by dissolving the AA43279 in the solvent of choice, which should be purged with an inert gas. AA43279 is soluble in DMSO and acetonitrile.

Description

AA43279 is an activator of voltage-gated sodium channel 1.1 ($\text{Na}_v1.1$; $\text{EC}_{50} = 9.5 \mu\text{M}$ in a patch-clamp assay using HEK293 cells expressing the human channel).¹ It is selective for $\text{Na}_v1.1$ over $\text{Na}_v1.4$ and $\text{Na}_v1.7$ at $30 \mu\text{M}$ but also activates $\text{Na}_v1.2$, $\text{Na}_v1.5$, and $\text{Na}_v1.6$ ($\text{EC}_{50}\text{s} = 22.8, 14.4, \text{ and } 11.6 \mu\text{M}$, respectively). AA43279 also inhibits I κ B kinase β (IKK β ; $\text{IC}_{50} = 2.9 \mu\text{M}$).² It increases the seizure threshold in the maximal electroshock seizure threshold (MEST) test in mice when administered at a dose of 300 mg/kg .¹

References

1. Frederiksen, K., Lu, D., Yang, J., *et al.* A small molecule activator of $\text{Na}_v1.1$ channels increases fast-spiking interneuron excitability and GABAergic transmission *in vitro* and has anti-convulsive effects *in vivo*. *Eur. J. Neurosci.* **46**(3), 1887-1896 (2017).
2. Morwick, T., Berry, A., Brickwood, J., *et al.* Evolution of the thienopyridine class of inhibitors of I κ B kinase- β : part I: Hit-to-lead strategies. *J. Med. Chem.* **49**(10), 2898-2908 (2006).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM