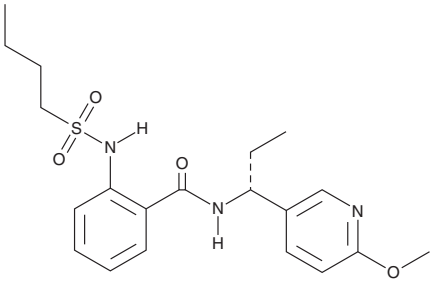
PRODUCT INFORMATION

AVE-1231

Item No. 45299

CAS Registry No.:	767334-89-4
Formal Name:	2-[(butylsulfonyl)amino]-N-[(1R)-1-(6-methoxy-3-pyridinyl)propyl]-benzamide
Synonym:	A293
MF:	$C_{20}H_{27}N_3O_4S$
FW:	405.5
Purity:	≥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

AVE-1231 is supplied as a solid. A stock solution may be made by dissolving the AVE-1231 in the solvent of choice, which should be purged with an inert gas. AVE-1231 is slightly soluble (0.1-1 mg/ml) in DMSO and a 1:1 solution of acetonitrile:water.

Description

AVE-1231 is an inhibitor of two-pore domain potassium channel 3.1 ($K_{2P}3.1$), also known as TWIK-related acid-sensitive potassium channel (TASK1).[1] It reduces potassium currents in *X. laevis* oocytes expressing TASK1 (IC_{50} = 0.22 µM) but also those expressing voltage-gated potassium channel 1.5 ($K_v1.5$; IC_{50} = 5.6 µM).[2] AVE-1231 (1 mg/kg) restores sinus rhythm in a porcine model of acute paroxysmal atrial fibrillation.[3] It also reduces the severity of experimental autoimmune encephalomyelitis (EAE) in wild-type mice but not *TASK1* knockout mice when administered at a dose of 0.02 mg/kg.[4]

References

1. Shvetsova, A.A., Lazarenko, V.S., Gaynullina, D.K., *et al.* TWIK-related acid-sensitive potassium channels (TASK-1) emerge as contributors to tone regulation in renal arteries at alkaline pH. *Front. Physiol.* **13**, 895863 (2022).
2. Kiper, A.K., Rinné, S., Rolfes, C., *et al.* Kv1.5 blockers preferentially inhibit TASK-1 channels: TASK-1 as a target against atrial fibrillation and obstructive sleep apnea? *Pflugers. Arch.* **467(5)**, 1081-1090 (2015).
3. Wiedmann, F., Beyersdorf, C., Zhou, X., *et al.* Pharmacologic TWIK-related acid-sensitive K^+ channel (TASK-1) potassium channel inhibitor A293 facilitates acute cardioversion of paroxysmal atrial fibrillation in a porcine large animal model. *J. Am. Heart Assoc.* **9(10)**, e015751 (2020).
4. Bittner, S., Bauer, M.A., Ehling, P., *et al.* The TASK1 channel inhibitor A293 shows efficacy in a mouse model of multiple sclerosis. *Exp. Neurol.* **238(2)**, 149-155 (2012).

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