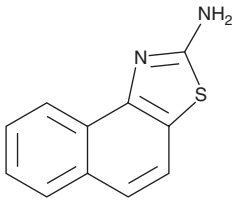
PRODUCT INFORMATION

SKA-31

Item No. 29690

CAS Registry No.:	40172-65-4
Formal Name:	naphtho[1,2-d]thiazol-2-amine
Synonym:	2-Aminonaphthiazole
MF:	$C_{11}H_8N_2S$
FW:	200.3
Purity:	≥95%
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

SKA-31 is supplied as a solid. A stock solution may be made by dissolving the SKA-31 in the solvent of choice, which should be purged with an inert gas. SKA-31 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SKA-31 in these solvents is approximately 3, 15, and 10 mg/ml, respectively.

SKA-31 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SKA-31 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SKA-31 has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SKA-31 is an activator of the small- and intermediate conductance calcium-activated potassium channels $K_{Ca}2.1$, $K_{Ca}2.2$, $K_{Ca}2.3$, and $K_{Ca}3.1$ (EC_{50}s = 2.9, 1.9, 2.9, and 0.26 µM, respectively, in a patch-clamp assay).[1] It also blocks the voltage-gated potassium (K_v) channels $K_v1.3$, $K_v1.5$, $K_v3.1$, and $K_v3.2$ by 10 to 30% and the voltage-gated sodium (Na_v) channels $Na_v1.2$, $Na_v1.4$, and $Na_v1.5$ by 9 to 40% in a panel of 13 ion channels when used at a concentration of 25 µM. SKA-31 increases vasodilation induced by acetylcholine (Item No. 23829) in isolated mouse carotid artery (EC_{50} = 93 nM) and induces relaxation of isolated rat mesenteric artery rings precontracted with phenylephrine (IC_{50} = 93 nM).[1,2] It decreases blood pressure in normotensive and angiotensin II-induced hypertensive mice when administered at a dose of 30 mg/kg.[1]

References

1. Sankaranarayanan, A., Raman, G., Busch, C., *et al.* Naphtho[1,2-d]thiazol-2-ylamine (SKA-31), a new activator of KCa2 and KCa3.1 potassium channels, potentiates the endothelium-derived hyperpolarizing factor response and lowers blood pressure. *Mol. Pharmacol.* **75(2),** 281-295 (2009).
2. Khaddaj-Mallat, R., Mathew John, C., and Braun, A. SKA-31, an activator of endothelial Ca^{2+}-activated K^+ channels evokes robust vasodilation in rat mesenteric arteries. *Eur. J. Pharmacol.* **831,** 60-67 (2018).

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