

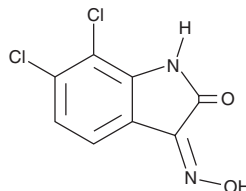
PRODUCT INFORMATION



NS 309

Item No. 18889

CAS Registry No.: 18711-16-5
Formal Name: 6,7-dichloro-1H-indole-2,3-dione 3-oxime
MF: $C_8H_4Cl_2N_2O_2$
FW: 231.0
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 233, 262, 313, 347 nm
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

NS 309 is supplied as a solid. A stock solution may be made by dissolving the NS 309 in the solvent of choice, which should be purged with an inert gas. NS 309 is soluble in DMSO.

Description

NS 309 is a nonselective activator of small- and intermediate-conductance Ca^{2+} -activated K^+ ($\text{SK}/\text{K}_{\text{Ca}2}$ and $\text{IK}/\text{K}_{\text{Ca}3.1}$) channels (EC_{50} s range from 0.12-1.2 μM for SK channels and 10-90 nM for IK channels).^{1,2} It can also activate voltage-gated $\text{K}_v11.1$ channels (hERG; $\text{IC}_{50} = 1 \mu\text{M}$), but does not, however, affect large conductance ($\text{BK}/\text{K}_{\text{Ca}1.1}$) channels.¹⁻³ NS 309 can modulate neuronal firing patterns by enhancing SK-mediated hyperpolarizing effects.^{1,2} It is 730-fold (SK channels) and 7,400-fold (IK channels) more potent than 1-EBIO (Item No. 14575) and often used in conjunction with CyPPA (Item No. 15614) to distinguish between SK1 and SK3 subtypes.^{1,2}

References

1. Pedarzani, P. and Stocker, M. Molecular and cellular basis of small- and intermediate-conductance, calcium-activated potassium channel function in the brain. *Cell. Mol. Life Sci.* **65(20)**, 3196-3217 (2008).
2. Hougaard, C., Eriksen, B.L., Jørgensen, S., *et al.* Selective positive modulation of the SK3 and SK2 subtypes of small conductance Ca^{2+} -activated K^+ channels. *Br. J. Pharmacol.* **151(5)**, 655-665 (2007).
3. Wulff, H. and Köhler, R. Endothelial small-conductance and intermediate-conductance KCa channels: An update on their pharmacology and usefulness as cardiovascular targets. *J. Cardiovasc. Pharmacol.* **61(2)**, 102-112 (2013).

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