

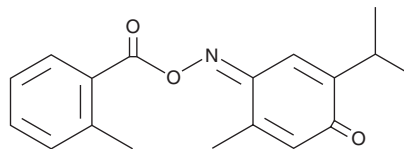
PRODUCT INFORMATION



Poloxin

Item No. 36018

CAS Registry No.: 321688-88-4
Formal Name: 1-[O-(2-methylbenzoyl)oxime]2-methyl-5-(1-methylethyl)-2,5-cyclohexadiene-1,4-dione
MF: $C_{18}H_{19}NO_3$
FW: 297.4
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 290 nm
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Poloxin is supplied as a solid. A stock solution may be made by dissolving the poloxin in the solvent of choice, which should be purged with an inert gas. Poloxin is soluble in organic solvents such as ethanol, dimethyl formamide (DMF), and DMSO. The solubility of poloxin in ethanol and DMF is approximately 1 mg/ml and approximately 2 mg/ml in DMSO.

Description

Poloxin is an inhibitor of the polo-like kinase 1 (Plk1) polo-box domain (PBD; apparent $IC_{50} = 4.8 \mu M$).¹ It is selective for the Plk1 PBD over Plk2 and Plk3 PBDs (IC_{50} s = 18.7 and 53.9 μM , respectively). Poloxin (5, 10, and 25 μM) induces cell cycle arrest at the G₂/M phase, apoptosis, and mislocalization of Plk1 in HeLa cells. It reduces cell proliferation in a panel of 10 cancer cell lines (EC_{50} s = 15-35 μM).² *In vivo*, poloxin (40 mg/kg) reduces tumor growth and induces intratumor apoptosis in an MDA-MB-231 breast cancer mouse xenograft model

References

1. Reindl, W., Yuan, J., Krämer, A., *et al.* Inhibition of polo-like kinase 1 by blocking polo-box domain-dependent protein-protein interactions. *Chem. Biol.* **15**(5), 459-466 (2008).
2. Yuan, J., Sanhaji, M., Krämer, A., *et al.* Polo-box domain inhibitor poloxin activates the spindle assembly checkpoint and inhibits tumor growth *in vivo*. *Am. J. Pathol.* **179**(4), 2091-2099 (2011).

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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