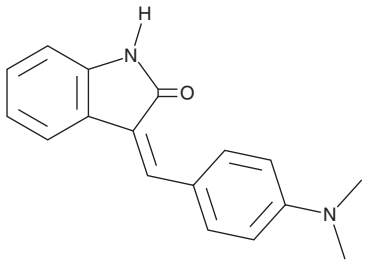
PRODUCT INFORMATION

SU 4312

Item No. 20213

CAS Registry No.:	5812-07-7
Formal Name:	3-[[4-(dimethylamino)phenyl] methylene]-1,3-dihydro-2H-indol-2-one
Synonym:	NSC 86429
MF:	$C_{17}H_{16}N_2O$
FW:	264.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 267, 436 nm
Supplied as:	A crystalline 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

SU 4312 is supplied as a crystalline solid. A stock solution may be made by dissolving the SU 4312 in the solvent of choice, which should be purged with an inert gas. SU 4312 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SU 4312 in these solvents is approximately 0.25, 10, and 30 mg/ml, respectively.

SU 4312 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SU 4312 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SU 4312 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SU 4312 is a selective, cell-permeable inhibitor of VEGFR2 and PDGFR tyrosine kinases (IC_{50}s = 0.8 and 19.4 µM, respectively).[1] It demonstrates IC_{50} values >100 µM at EGFR, HER2, and IGF-1R.[1] SU 4312 has been shown to inhibit VEGF-dependent angiogenesis in a zebrafish assay (IC_{50} = 1.8 µM) without affecting normal cells.[2] SU 4312 has also been shown to prevent MPP^+-induced neuronal apoptosis *in vitro*, as well as to decrease MPTP-induced loss of dopaminergic neurons, reduce expression of mRNA for tyrosine hydroxylase, and impair swimming behavior in zebrafish.[3]

References

1. Sun, L., Tran, N., Tang, F., *et al.* Synthesis and biological evaluations of 3-substituted indolin-2-ones: A novel class of tyrosine kinase inhibitors that exhibit selectivity toward particular receptor tyrosine kinases. *J. Med. Chem.* **41(14)**, 2588-2603 (1998).
2. Tran, T. C., Sneed, B., Haider, J., *et al.* Automated, quantitative screening assay for antiangiogenic compounds using transgenic zebrafish. *Cancer Res.* **67(23)**, 11386-11392 (2007).
3. Cui, W., Zhang, Z., Li, W., *et al.* The anti-cancer agent SU4312 unexpectedly protects against MPP^+-induced neurotoxicity *via* selective and direct inhibition of neuronal NOS. *Br. J. Pharmacol.* **168(5)**, 1201-1214 (2013).

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