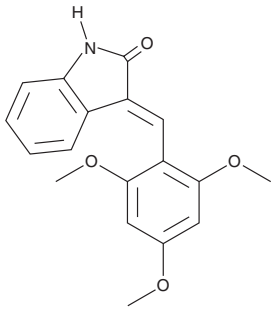
PRODUCT INFORMATION

IC261

Item No. 17260

CAS Registry No.:	186611-52-9
Formal Name:	1,3-dihydro-3-[(2,4,6-trimethoxyphenyl) methylene]-2H-indol-2-one
Synonym:	SU5607
MF:	$C_{18}H_{17}NO_4$
FW:	311.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 255, 358 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

IC261 is supplied as a crystalline solid. A stock solution may be made by dissolving the IC261 in the solvent of choice. IC261 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of IC261 in ethanol is approximately 0.5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

IC261 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IC261 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. IC261 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

IC261 is a reversible, ATP-competitive inhibitor of casein kinase 1 (CK1) that inhibits CK1δ and CK1ε (IC_{50} = ~1 µM for both), as well as CK1α (IC_{50} = 16 µM).[1] It is at least 100-fold less effective against PKA, $p34^{cdc2}$, and $p55^{fyn}$.[1] IC261, at 1 µM, inhibits cytokinesis in primary mouse embryo fibroblasts.[2] IC261 is used to elucidate the role of CK1 in cells and in whole organisms.[3-5]

References

1. Mashhoon, N., DeMaggio, A.J., Tereshko, V., *et al.* Crystal structure of a conformation-selective casein kinase-1 inhibitor. *J. Biol. Chem.* **275(26)**, 20052-20060 (2000).
2. Behrend, L., Milne, D.M., Stöter, M., *et al.* IC261, a specific inhibitor of the protein kinases casein kinase 1-delta and -epsilon, triggers the mitotic checkpoint and induces p53-dependent postmitotic effects. *Oncogene* **19(47)**, 5303-5313 (2000).
3. van Ooijen, G., Martin, S.F., Barrios-Llerena, M.E., *et al.* Functional analysis of the rodent $CK1^{tau}$ mutation in the circadian clock of a marine unicellular alga. *BMC Cell Biol.* **14**, (2013).
4. Rachidi, N., Taly, J.F., Durieu, E., *et al.* Pharmacological assessment defines *Leishmania donovani* casein kinase 1 as a drug target and reveals important functions in parasite viability and intracellular infection. *Antimicrob. Agents Chemother.* **58(3)**, 1501-1515 (2014).
5. Kurihara, T., Sakurai, E., Toyomoto, M., *et al.* Alleviation of behavioral hypersensitivity in mouse models of inflammatory pain with two structurally different casein kinase 1 (CK1) inhibitors. *Mol. Pain* **10**, (2014).

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