

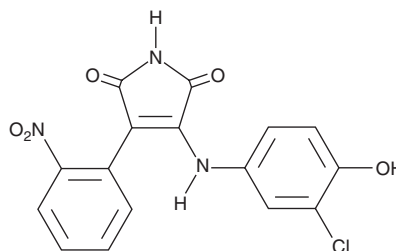
PRODUCT INFORMATION



SB-415286

Item No. 10010247

CAS Registry No.: 264218-23-7
Formal Name: 3-[(3-chloro-4-hydroxyphenyl)amino]-4-(2-nitrophenyl)-1H-pyrrole-2,5-dione
MF: C₁₆H₁₀ClN₃O₅
FW: 359.7
Purity: ≥98%
UV/Vis.: λ_{max}: 211, 236, 389 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

SB-415286 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB-415286 in an organic solvent purged with an inert gas. SB-415286 is soluble in the organic solvent DMSO. The solubility of SB-415286 in DMSO is approximately 16 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Glycogen synthase kinase 3 (GSK3) is a serine/threonine protein kinase that is inhibited by an assortment of extracellular stimuli such as insulin, growth factors, cell specification factors, and cell adhesion. Its activity regulates many cell functions including the control of cell division, apoptosis, and inflammation. SB-415286 is a potent and selective cell-permeable, ATP-competitive inhibitor of GSK3 α with an IC₅₀ value of 78 nM (similar potency for GSK3 β) and a K_i value of 31 nM.¹ As a result of GSK3 inhibition, SB-415286 stimulates glycogen synthesis in the Chang human liver cell line with an EC₅₀ value of 2.9 μ M.¹ SB-415286 also protects primary neurons from death induced by the PI3-kinase pathway.²

References

1. Coghlan, M.P., Culbert, A.A., Cross, D.A.E., *et al.* Selective small molecule inhibitors of glycogen synthase kinase-3 modulate glycogen metabolism and gene transcription. *Chemistry & Biology* **7**(10), 793-803 (2000).
2. Cross, D.A.E., Culbert, A.A., Chalmers, K.A., *et al.* Selective small-molecule inhibitors of glycogen synthase kinase-3 activity protect primary neurons from death. *J. Neurochem.* **77**, 94-102 (2001).

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.

WARRANTY AND LIMITATION OF REMEDY

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