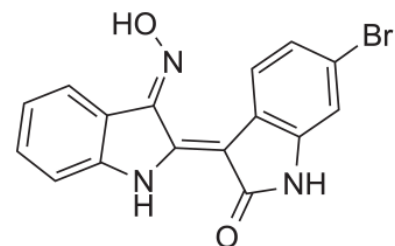


BIO

Catalog Number: ST10029



Size	5 mg
Description	BIO is a reversible and ATP-competitive inhibitor of GSK-3 α/β (IC ₅₀ = 5 nM) that functions as a WNT pathway activator. Under feeder-free conditions, BIO maintains the undifferentiated state of both mouse and human ES cells. It has been used to promote differentiation of cardiomyocytes from hES and iPS cells. BIO has also been shown to enhance reprogramming of mouse fibroblasts, neural stem cells, and thymocytes to iPS cells.
Molecular Weight	356.17
Molecular Formula	C ₁₆ H ₁₀ BrN ₃ O ₂
Chemical Name	(3Z)-6-bromo-3-[3-(hydroxyamino)indol-2-ylidene]-1H-indol-2-one
CAS Number	667463-62-9
PubChem Identifier	5287844
Appearance	Dark red solid
Purity	>95% by HPLC analysis
Solubility	Soluble in DMSO at 100 mM and ethanol at 50 mM
Reconstitution	For a 10 mM concentrated stock solution, reconstitute the compound by adding 1.4 mL of DMSO to the entire contents of vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes.
Recommended Usage	For use in cell culture, warm medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 μ M low-protein binding filter. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%.
Storage and Stability	Solid: Shipped at room temperature. Store at -20°C. Stable for 6 months when stored as directed. Solution: Following reconstitution, store aliquots in tightly sealed vials at -20°C. Avoid repeated freeze-thaw cycles.
References	<p>Lian, X., et al. (2012) Robust cardiomyocyte differentiation from human pluripotent stem cells via temporal modulation of canonical Wnt signaling. <i>Proc Natl Acad Sci USA</i> 109(27): E1848-1857. PMID: 22645348.</p> <p>Lluis, F., et al. (2008) Periodic activation of Wnt/beta-catenin signaling enhances somatic cell reprogramming mediated by cell fusion. <i>Cell Stem Cell</i> 3(5): 493-507. PMID: 18983965.</p> <p>Sato, N., et al. (2004) Maintenance of pluripotency in human and mouse embryonic stem cells through activation of Wnt signaling by a pharmacological GSK-3-specific inhibitor. <i>Nat Med</i> 10(1): 55-63. PMID: 14702635.</p> <p>Tseng, A.S., et al. (2006) The GSK-3 inhibitor BIO promotes proliferation in mammalian cardiomyocytes. <i>Chem Biol</i> 13(9): 957-963. PMID: 16984885.</p>

PRODUCT WARRANTY

BioTime, Inc. and/or its subsidiaries warrants its products as set forth in the General Terms and Conditions of Sale found on ESI BIO's website at www.esibio.com/termsandconditions. ©2014 BioTime, Inc. All rights reserved. ESI BIO, ESI BIO logo and all other trademarks mentioned herein are the property of BioTime, Inc. and/or its subsidiaries or their respective owners. For support visit www.esibio.com/support or email techsupport@esibio.com