

Cat No. 45-H38

BIO

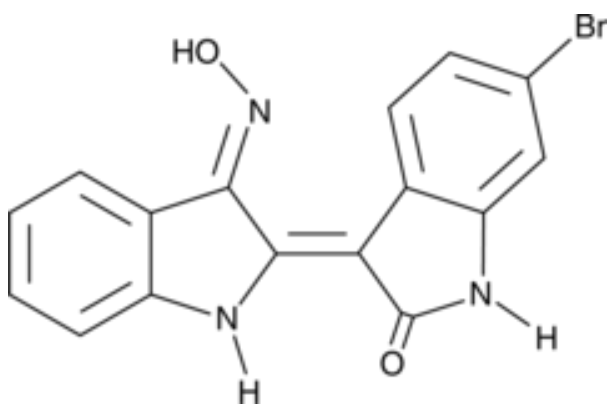
2 mg

BIO is a potent, reversible and ATP-competitive inhibitor of GSK3 α/β . The inhibition of GSK by BIO has been shown to activate the Wnt signaling pathway and sustain pluripotency in murine and human embryonic stem cells. BIO is the first pharmacological agent shown to maintain self-renewal in human and mouse embryonic stem cells. It has also been shown to induce the differentiation of neonatal cardiomyocytes.



For research purposes only

TECHNICAL INFORMATION



Other Names: GSK 3 IX, MLS 2052, 6-bromo-3-[(3E)-1,3-dihydro-3-(hydroxyimino)-2H-indol-2-ylidene]-1,3-dihydro-(3Z)-2H-indol-2-one

Chemical Formula: C₁₆H₁₀BrN₃O₂

CAS Number: 667463-62-9

Molecular Weight: 356.2

Purity: >98%

Appearance: a crystalline solid

Solubility: DMSO

STORAGE AND HANDLING

Storage: Store at 4°C and protected from light. Following reconstitution, store aliquots at -20°C.

Stability: Stock solutions stable at -20°C for up to 2 years.

Shipping Conditions: Shipped at room temperature.

PRODUCT USE

Soluble in DMSO. For a 10 mM concentrated stock solution, reconstitute the compound by adding 561.5 μ l of DMSO to the entire contents of the vial. If precipitate is observed, vortex for 5 minutes. For most cells, the maximum tolerance to DMSO is less than 0.5%.

REFERENCES

1. Sato 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. *Nat Med.* 10(1):55-63.
2. Ying et al. (2008) The ground state of embryonic stem cell self-renewal. *Nature.* 453(7194):519-23.
3. Polychronopoulos et al. (2004) Structural basis for the synthesis of indirubins as potent and selective inhibitors of glycogen synthase kinase-3 and cyclin-dependent kinases. *J Med Chem.* 47(4):935-46.