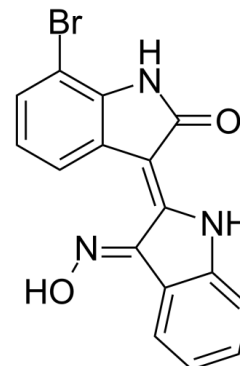


Data Sheet

Product Name:	7BIO
Cat. No.:	CS-0079342
CAS No.:	916440-85-2
Molecular Formula:	C ₁₆ H ₁₀ BrN ₃ O ₂
Molecular Weight:	356.17
Target:	CDK; GSK-3
Pathway:	Cell Cycle/DNA Damage; PI3K/Akt/mTOR; Stem Cell/Wnt
Solubility:	Ethanol : 50 mg/mL (140.38 mM; Need ultrasonic); DMSO : 250 mg/mL (701.91 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

7BIO (7-Bromoindirubin-3-Oxime) is the derivative of indirubin. 7BIO (7-Bromoindirubin-3-Oxime) has inhibitory effects against cyclin-dependent kinase-5 (**CDK5**) and glycogen synthase kinase-3 β (**GSK3 β**). 7BIO (7-Bromoindirubin-3-Oxime) inhibits A β oligomer-induced neuroinflammation, synaptic impairments, tau hyper-phosphorylation, activation of astrocytes and microglia, and attenuates A β oligomer-induced cognitive impairments in mice^[1]. **In Vitro:** 7BIO (1 and 10 μ M; 24 hours) has neuroprotective effects and can prevent, but cannot rescue A β 1–42 oligomer-induced cell death in SH-SY5Y cells^[1]. **In Vivo:** 7Bio (2.3, 7.0, and 23.3 μ g/kg; bilateral ventricle injection) significantly attenuates A β oligomer-induced impairment of recognition, spatial learning and memory in mice^[1]. 7Bio (2.3, 7.0, and 23.3 μ g/kg; bilateral ventricle injection) decreases A β oligomer-induced increase of TNF- α and IL-6 production in the brain and the expression of synapsin-1 and PSD-95 in the hippocampal region of mice^[1]. 7Bio (2.3, 7.0, and 23.3 μ g/kg; bilateral ventricle injection) attenuates A β oligomer-induced increase expression of pTau, activation of microglia and astrogliosis in the brain of mice^[1]. 7Bio (2.3, 7.0, and 23.3 μ g/kg; bilateral ventricle injection) prevents decreased expression of pSer9-GSK3 β and has no significant effects on the Tau protein level^[1].

References:

[1]. Chen L, et al. Indirubin Derivative 7-Bromoindirubin-3-Oxime (7Bio) Attenuates A β Oligomer-Induced Cognitive Impairments in Mice. *Front Mol Neurosci.* 2017;10:393.

CAIndexNames:

2H-Indol-2-one, 7-bromo-3-[1,3-dihydro-3-(hydroxyimino)-2H-indol-2-ylidene]-1,3-dihydro-

SMILES:

O/N=C1C2=CC=CC=C2NC\1=C3C(NC4=C(C=CC=C4/3)Br)=O

Caution: Product has not been fully validated for medical applications. For research use only.

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