# **PRODUCT** INFORMATION



**7**BIO

Item No. 19619

CAS Registry No.:	916440-85-2	110	
Formal Name:	7-bromo-3-[1,3-dihydro-3-(hydroxyimino)-2H-	HU	
	indol-2-ylidene]-1,3-dihydro-2H-indol-2-one	N //	$\int $
Synonym:	7-Bromoindirubin-3'-oxime	$\sim$ $\frac{1}{2}$	Br
MF:	C <sub>16</sub> H <sub>10</sub> BrN <sub>3</sub> O <sub>2</sub>	$\int \left( \right) \left( \left) \left( \right) \left( \right) \left( \right) \left( \right) \left( \left) \left( \right) \left( \right) \left( \right) \left( \right) \left( \left) \left( \right) \left( \right) \left( \right) \left( \right) \left( \left) \left( \right) \left( \right) \left( \right) \left( \left) \left( \right) \left( \left) \left( \right) \left( \left( \right) \left( \left( \right) \left( \right) \left( \left( \left( \right)$	$/ \gamma$
FW:	356.2		N.
Purity:	≥99%	N,	Н
Supplied as:	A solid	\ H	0
Storage:	-20°C		
Stability:	≥4 years		
Special Conditions: Keep cool and dry. Protect from light and moisture			
and the second			

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

# Laboratory Procedures

7BIO is supplied as a solid. A stock solution may be made by dissolving the 7BIO in the solvent of choice. 7BIO is soluble in organic solvents such as ethanol and DMSO.

# Description

7BIO is a derivative of indirubin (Item No. 14155) that triggers a rapid cell death process that is distinct from apoptosis and devoid of cytochrome c release or caspase activation.<sup>1</sup> Furthermore, in contrast to other indirubin derivatives, 7BIO has only marginal activity against the classic indirubin targets, cyclin-dependent kinases and GSK3.<sup>1,2</sup> Instead, 7BIO inhibits FLT3 (IC<sub>50</sub> = 0.34  $\mu$ M) and the dual-specificity tyrosine phosphorylation-regulated kinases, DYRK1A and DYRK2 (IC<sub>50</sub>s = 1.9 and 1.3  $\mu$ M, respectively).<sup>1,3</sup> It also inhibits Aurora B and C kinases with IC<sub>50</sub> values of 4.6 and 0.7  $\mu$ M, respectively.<sup>1,4</sup>

# References

- 1. Ribas, J., Bettayeb, K., Ferandin, Y., et al. 7-Bromoindirubin-3'-oxime induces caspase-independent cell death. Oncogene 25(47), 6304-6318 (2006).
- 2. Ferandin, Y., Bettayeb, K., Kritsanida, M., et al. 3'-Substituted 7-halogenoindirubins, a new class of cell death inducing agents. J. Med. Chem. 49, 4638-4649 (2006).
- 3. Myrianthopoulos, V., Kritsanida, M., Gaboriaud-Kolar, N., et al. Novel inverse binding mode of indirubin derivatives yields improved selectivity for DYRK kinases. ACS Med. Chem. Lett. 4(1), 22-26 (2013).
- 4. Myrianthopoulos, V., Magiatis, P., Ferandin, Y., et al. An integrated computational approach to the phenomenon of potent and selective inhibition of aurora kinases B and C by a series of 7-substituted indirubins. J. Med. Chem. 50(17), 4027-4037 (2007).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

## SAFETY DATA

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.

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