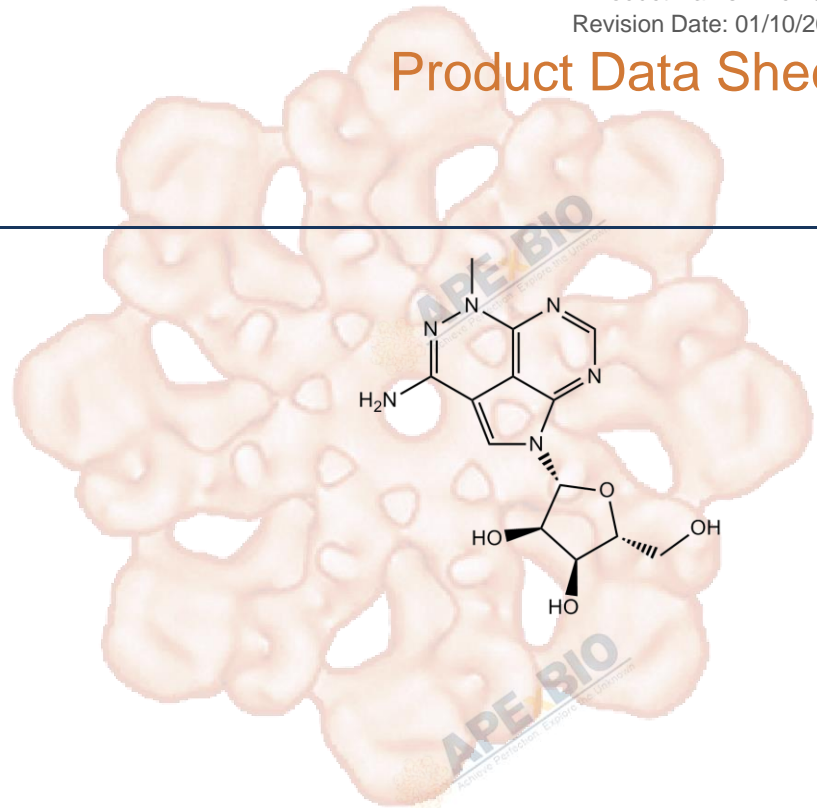


Product Data Sheet

Triciribine

Cat. No.:	A8541
CAS No.:	35943-35-2
Formula:	C ₁₃ H ₁₆ N ₆ O ₄
M.Wt:	320.3
Synonyms:	
Target:	PI3K/Akt/mTOR Signaling
Pathway:	Akt
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; insoluble in EtOH; ≥118.4 mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	3.1221 mL	15.6104 mL	31.2207 mL
	5 mM	0.6244 mL	3.1221 mL	6.2441 mL
	10 mM	0.3122 mL	1.5610 mL	3.1221 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Akt inhibitor, highly selective

IC₅₀ & Target

20 nM (HIV-1), 130 nM (Akt)

In Vitro

Cell Viability Assay

Cell Line:	Astrocytoma cells, HIV-1, PC-3 cells
Preparation method:	The solubility of this compound in DMSO is >118.4mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	IC ₅₀ : 130 nM (Akt), IC ₅₀ : 0.02-0.46 μM (HIV-1/2)

	Applications:	Triciribine (1-10 μM) inhibited cell growth in Nf1 and Trp53 mutant astrocytoma cells. Triciribine (100 μM) inhibited phosphorylation of Akt and p70S6K to basal levels. Triciribine incompletely inhibited the WHO II K1861-10 line with a GI50 value of 1.7 μM . Triciribine inhibited tumor lines (KR158, KR130, and SF295) to a greater extent at lower GI50 values (0.4–1.1 μM). Triciribine inhibited HIV-1 with an IC50 of 20 nM. Triciribine (5 μM) completely inhibited syncytia formation. Triciribine markedly inhibited HIV-1-induced p24 core antigen production, reverse transcriptase, and infectious virus production in a dose-dependent manner using HIV-1 acutely infected CEM-SS, H9, and persistently infected H9III B and U1 cells. Triciribine inhibited Akt phosphorylation at Thr308 and Ser473 and Akt activity in the human prostate cancer cell line PC-3.
In Vivo	Animal experiment	
	Animal models:	Nude mice bearing OVCAR3, OVCAR8 and PANC1 tumor
	Dosage form:	Intraperitoneal injection, 1 mg/kg/day, 7 days
	Applications:	Triciribin treatment inhibited OVCAR3, OVCAR8 and PANC1 tumor growth.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Li Y, Yang Y, et al. "Astragaloside IV reduces neuronal apoptosis and parthanatos in ischemic injury by preserving mitochondrial hexokinase-II." *Free Radic Biol Med.* 2019 Feb 1;131:251-263. PMID:30502455
2. Du Q, Zhang S, et al. "Astragaloside IV Inhibits Adipose Lipolysis and Reduces Hepatic Glucose Production via Akt Dependent PDE3B Expression in HFD-Fed Mice." *Front Physiol.* 2018 Jan 23;9:15. PMID:29410630
3. Qun Liu, Fei-Ge Zhang, et al. "Ginsenoside Rg1 Inhibits Glucagon-Induced Hepatic Gluconeogenesis through Akt-FoxO1 Interaction." *Theranostics* 2017; 7(16):4001-4012.
4. Song J, Li Y, et al. "Mangiferin protects mitochondrial function by preserving mitochondrial hexokinase-II in vessel endothelial cells." *Biochim Biophys Acta.* 2017 Jul;1863(7):1829-1839. PMID:28478227
5. Yang YL, Li J, et al. "Ginsenoside Rg5 increases cardiomyocyte resistance to ischemic injury through regulation of mitochondrial hexokinase-II and dynamin-related protein 1." *Cell Death Dis.* 2017 Feb 23;8(2):e2625. PMID:28230856

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References

- [1]. Gürsel D B, Connell-Albert Y S, Tuskan R G, et al. Control of proliferation in astrocytoma cells by the receptor tyrosine kinase/PI3K/AKT signaling axis and the use of PI-103 and TCN as potential anti-astrocytoma therapies[J]. *Neuro-oncology*, 2011, 13(6): 610-621.
- [2]. KUCERA L S, IYER N P, PUCKETT S H, et al. Activity of triciribine and triciribine-5'-monophosphate against human immunodeficiency virus types 1 and 2[J]. *AIDS research and human retroviruses*, 1993, 9(4): 307-314.

[3]. Dieterle A, Orth R, Daubrawa M, et al. The Akt inhibitor triciribine sensitizes prostate carcinoma cells to TRAIL - induced apoptosis[J]. International journal of cancer, 2009, 125(4): 932-941.

[4]. Yang L, Dan H C, Sun M, et al. Akt/protein kinase B signaling inhibitor-2, a selective small molecule inhibitor of Akt signaling with antitumor activity in cancer cells overexpressing Akt[J]. Cancer research, 2004, 64(13): 4394-4399.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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