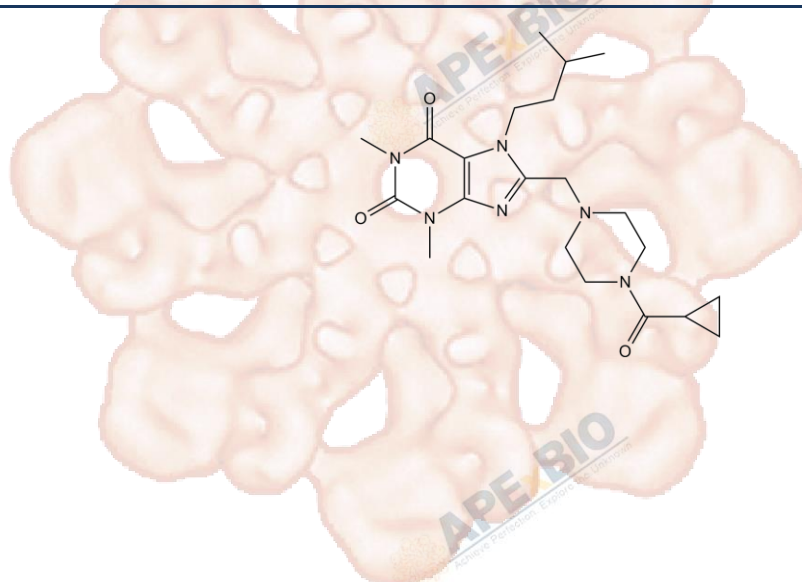


Product Data Sheet

NCT-501

Cat. No.:	B6044
CAS No.:	1802088-50-1
Formula:	C ₂₁ H ₃₂ N ₆ O ₃
M.Wt:	416.52
Synonyms:	
Target:	Metabolism
Pathway:	aldehyde dehydrogenase
Storage:	Store at -20°C



Solvent & Solubility

≥20.85 mg/mL in DMSO with gentle warming; insoluble in H₂O; ≥11 mg/mL in EtOH

In Vitro

Preparing Stock Solutions	Mass		1mg	5mg	10mg
	Solvent	Concentration			
		1 mM	2.4008 mL	12.0042 mL	24.0085 mL
		5 mM	0.4802 mL	2.4008 mL	4.8017 mL
		10 mM	0.2401 mL	1.2004 mL	2.4008 mL

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

Biological Activity

Shortsummary

Aldehyde Dehydrogenase 1A1 (ALDH1A1) inhibitor, Potent and Selective

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	Cal-27 CisR cells
Preparation method:	This compound is soluble in DMSO. 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:	10, 20, 40 and 80 nM

	Applications:	At the doses of 40 and 80 nM, NCT-501 reduced the self-renewal property and the migratory potential of Cal-27 CisR cells. In Cal-27 CisR cells treated with 20 μ M Cisplatin and 20 nM NCT-501, the cell viability decreased by 16%, but the difference was not statistically significant.
In Vivo	Animal experiment	
	Animal models:	Nude mice bearing Cal-27 CisR cells
	Dosage form:	100 μ g; intra-tumorally; every alternate day for 20 days
	Applications:	In nude mice bearing Cal-27 CisR cells, NCT-501 inhibited tumor growth by 78%. Tumor growth kinetics showed a 3.3-fold increase in tumor volume in the control group but only a 1.6-fold increase in the treatment group. Compared with the control group, the treatment group exhibited similar weight loss over the period of study.
	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

See more customer validations on www.apexbt.com.

References

[1]. Yang S M, Yasgar A, Miller B, et al. Discovery of NCT-501, a Potent and Selective Theophylline-Based Inhibitor of Aldehyde Dehydrogenase 1A1 (ALDH1A1)[J]. Journal of medicinal chemistry, 2015, 58(15): 5967-5978.

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 APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term 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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