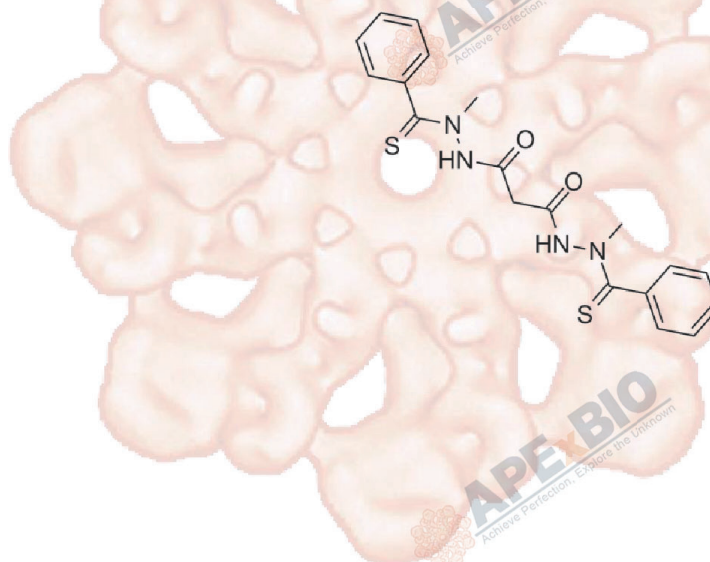


Product Data Sheet

Elesclomol (STA-4783)

Cat. No.:	A4386
CAS No.:	488832-69-5
Formula:	C ₁₉ H ₂₀ N ₄ O ₂ S ₂
M.Wt:	400.5
Synonyms:	STA 4783, STA4783
Target:	Proteases
Pathway:	HSP
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥20.15 mg/mL in DMSO; ≥5.68 mg/mL in EtOH with gentle warming and ultrasonic

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	Concentration			
	1 mM	2.4969 mL	12.4844 mL	24.9688 mL
	5 mM	0.4994 mL	2.4969 mL	4.9938 mL
	10 mM	0.2497 mL	1.2484 mL	2.4969 mL

Please refer to the solubility information to select the appropriate solvent

Biological Activity

Shortsummary

Oxidative stress/apoptosis inducer, potent and novel

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: HSB2 cells

Preparation method: The solubility of this compound in DMSO is > 10 mM. 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: 200 nM; 18 hrs

	Applications:	In HSB2 cells, Elesclomol increased the number of early and late apoptotic cells (3.7- and 11-fold, respectively).
In Vivo	Animal experiment	
	Animal models:	Nude mouse xenograft models of human breast cancers (MDA435, MCF7 and ZR-75-1), lung cancer (RER) or lymphoma (U937)
	Dosage form:	25 ~ 100 mg/kg; i.v.
	Applications:	In nude mouse xenograft models of human breast cancers (MDA435, MCF7 and ZR-75-1), lung cancer (RER) or lymphoma (U937), a single dose of Elesclomol (25 ~ 100 mg/kg) showed no antitumor activity. But Elesclomol substantially enhanced the efficacy of chemotherapeutic agents such as Paclitaxel, both in terms of tumor regression and extended survival of mice.
	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. Albayrak G, Korkmaz FD, et al. "The outcomes of an impaired powerhouse in KRAS mutant lung adenocarcinoma cells by Elesclomol." J Cell Biochem. 2019 Jan 10.PMID:30628735
2. Li H, Guo S, et al."Lipopolysaccharide and heat stress impair the estradiol biosynthesis in granulosa cells via increase of HSP70 and inhibition of smad3 phosphorylation and nuclear translocation." Cell Signal. 2017 Jan;30:130-141.PMID:27940052
3. Ali A. Alshamrani, James L. et al. "Inhibiting Lactate Dehydrogenase A Enhances the Cytotoxicity of the Mitochondria Accumulating Antioxidant, Mitoquinone, in Melanoma Cells." Human Skin Cancer, Potential Biomarkers and Therapeutic Targets.October 19th 2016.

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References

- [1]. Jessica R. Kirshner, Suqin He, Vishwasenani Balasubramanyam, Jane Kepros, Chin-Yu Yang, Mei Zhang, Zhenjian Du, James Barsoum, and John Bertin. Elesclomol induces cancer cell apoptosis through oxidative stress. Mol Cancer Ther 2008; 7:2319-2327
- [2]. Gehrman M. Drug evaluation: STA-4783--enhancing taxane efficacy by induction of Hsp70. Curr Opin Investig Drugs. 2006 Jun;7(6):574-80.

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. 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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