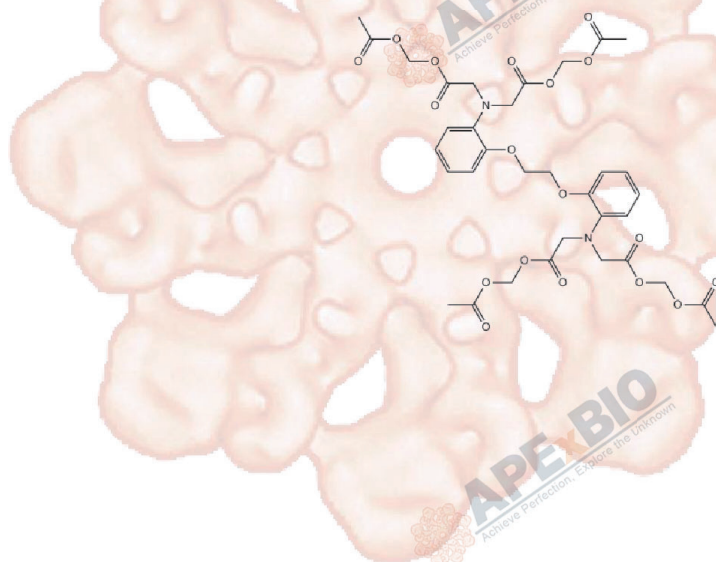


# Product Data Sheet

## BAPTA-AM

<b>Cat. No.:</b>	B4758
<b>CAS No.:</b>	126150-97-8
<b>Formula:</b>	C <sub>34</sub> H <sub>40</sub> N <sub>2</sub> O <sub>18</sub>
<b>M.Wt:</b>	764.68
<b>Synonyms:</b>	
<b>Target:</b>	Others
<b>Pathway:</b>	Others
<b>Storage:</b>	Desiccate at -20°C



## Solvent & Solubility

insoluble in H<sub>2</sub>O; insoluble in EtOH; ≥16.3 mg/mL in DMSO with gentle warming

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		<b>1 mM</b>	1.3077 mL	6.5387 mL	13.0774 mL
		<b>5 mM</b>	0.2615 mL	1.3077 mL	2.6155 mL
		<b>10 mM</b>	0.1308 mL	0.6539 mL	1.3077 mL

Please refer to the solubility information to select the appropriate solvent

## Biological Activity

Shortsummary	calcium chelator, selective and membrane permeable	
IC <sub>50</sub> & Target		
In Vitro	<b>Cell Viability Assay</b>	
	Cell Line:	Human leukemia cell lines HL-60 and U937, Bovine chromaffin cells
	Preparation method:	The solubility of this compound in DMSO is >16.3mg/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:	10 μM, 50 μM; 6 h;

	Applications:	In human leukemia cell lines HL-60 and U937, BAPTA/AM (10 $\mu$ M) exhibited classic apoptotic morphology, and BAPTA/AM (50 $\mu$ M) induced atypical features (e.g., cell swelling, chromatin clumping). Superfusion with BAPTA-AM (50 $\mu$ M) induced a rapid (< 60 s) and reversible block of both IKCa and IK (~50%). Preincubation with BAPTAAM (50 $\mu$ M, 30 min) or cell loading with the non-permeable active form of BAPTA (10 mM in the pipette solution) permanently blocked IKCa. BAPTA-AM superfusion (50 $\mu$ M) blocked IK (~53%) after BAPTA-loading or BAPTA-AM preincubation.
In Vivo	<b>Animal experiment</b>	
	Animal models:	Swiss (Rj)Orl mice, Male C57BL/6J mice
	Dosage form:	0–10 mg/kg, 30 min
	Applications:	In Swiss (Rj)Orl mice, pretreatment with BAPTA-AM (0–10 mg/kg, 30 min) prevented locomotor stimulation produced by ethanol without altering basal locomotion. BAPTA-AM reversed ethanol-induced hypnotic effects. Following a drinking-in-the-dark methodology, male C57BL/6J mice were offered 20% v/v ethanol, tap water, or 0.1% sweetened water. BAPTA-AM pretreatment (0–5 mg/kg) dose-dependently reduced ethanol consumption while leaving water and sweetened water intake unaffected.
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 S, Lu D, et al. "Electrical Stimulation Activates Fibroblasts through the Elevation of Intracellular Free Ca(2+): Potential Mechanism of Pelvic Electrical Stimulation Therapy." Biomed Res Int. 2019 Apr 21;2019:7387803.PMID:31139648
2. Wang J, Yang C, et al. "T-2 Toxin Exposure Induces Apoptosis in TM3 Cells by Inhibiting Mammalian Target of Rapamycin/Serine/Threonine Protein Kinase(mTORC2/AKT) to Promote Ca(2+)Production." Int J Mol Sci. 2018 Oct 27;19(11). pii: E3360.PMID:30373220
3. Wang Y, Lu S, et al. "Sonic hedgehog induces GLT-1 degradation via PKC delta to suppress its transporter activities." Neuroscience. 2017 Oct 6;365:217-225.PMID:28993237

See more customer validations on [www.apexbt.com](http://www.apexbt.com).

## References

- [1]. Grant S, Freemerman AJ, Gregory PC, et al. Induction of apoptotic DNA fragmentation and c-jun downregulation in human myeloid leukemia cells by the permeant Ca<sup>2+</sup> chelator BAPTA/AM. Oncol Res, 1995, 7(7-8): 381-392.
- [2]. Urbano FJ, Buo W. BAPTA-AM blocks both voltage-gated and Ca<sup>2+</sup>-activated K<sup>+</sup> currents in cultured bovine chromaffin cells. Neuroreport, 1998, 9(15): 3403-3407.
- [3] Balio P, Monferrer L, Pastor R, et al. Intracellular calcium chelation with BAPTA-AM modulates ethanol-induced behavioral effects

in mice. Exp Neurol, 2012, 234(2): 446-453.

## 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.*



**APExBIO Technology**

**[www.apexbt.com](http://www.apexbt.com)**

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: [info@apexbt.com](mailto:info@apexbt.com)

