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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# BAPTA

**Cat. No.:** HY-100168

**CAS No.:** 85233-19-8

**Molecular Formula:** $C_{22}H_{24}N_2O_{10}$

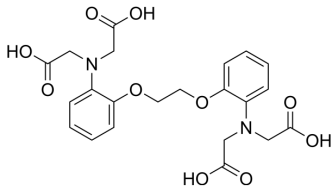
**Molecular Weight:** 476

**Target:** Phospholipase

**Pathway:** Metabolic Enzyme/Protease

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |



## SOLVENT & SOLUBILITY

**In Vitro**

1M NaOH : 33.33 mg/mL (70.02 mM; ultrasonic and adjust pH to 11 with NaOH)
DMSO : 15.62 mg/mL (32.82 mM; ultrasonic and warming and heat to 60°C)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.1008 mL | 10.5042 mL | 21.0084 mL |
| 5 mM | 0.4202 mL | 2.1008 mL | 4.2017 mL |
| 10 mM | 0.2101 mL | 1.0504 mL | 2.1008 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.56 mg/mL (3.28 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.56 mg/mL (3.28 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.56 mg/mL (3.28 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

BAPTA is a selective chelator for calcium. BAPTA, as calcium indicator, has high selectivity against magnesium and calcium. BAPTA is widely used as an intracellular buffer for investigating the effects of $Ca^{2+}$ release from intracellular stores or influx via $Ca^{2+}$-permeable channels in the plasma membrane. BAPTA can also inhibit phospholipase C activity independently of their role as $Ca^{2+}$ chelators[1][2].

**$IC_{50}$ & Target**

Calcium[1]

| | |
|---|---|
| **In Vitro** | BAPTA (0.3-30 μM; 1 h) can be used for the prevention of [$Ca^{2+}$]-induced cell damage, but disturbe calcium signalling in isingle differentiated NH15-CA2 neuroblastoma and glioma hybrid cells[3].<br>?BAPTA (0-10 mM) inhibits phospholipase C (PLC) activity in a dose-dependent manner, and is unrelated to $Ca^{2+}$[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## CUSTOMER VALIDATION

- Sci Immunol. 2019 Jun 28;4(36):eaau6426.
- Mil Med Res. 2023 Nov 25;10(1):56.
- Adv Sci (Weinh). 2021 May 27;e2100363.
- J Thromb Haemost. 2021 Aug 19.
- Sci Total Environ. 2020 Feb 10;703:134702.

See more customer validations on www.MedChemExpress.com

## REFERENCES


[1]. R Y Tsien, et al. New calcium indicators and buffers with high selectivity against magnesium and protons: design, synthesis, and properties of prototype structures. Biochemistry. 1980 May 27;19(11):2396-404.

[2]. Roger C Hardie, et al. Inhibition of phospholipase C activity in Drosophila photoreceptors by 1,2-bis(2-aminophenoxy)ethane N,N,N',N'-tetraacetic acid (BAPTA) and di-bromo BAPTA. Cell Calcium. 2005 Dec;38(6):547-56.

[3]. M B Collatz, et al. Intracellular calcium chelator BAPTA protects cells against toxic calcium overload but also alters physiological calcium responses. Cell Calcium





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