



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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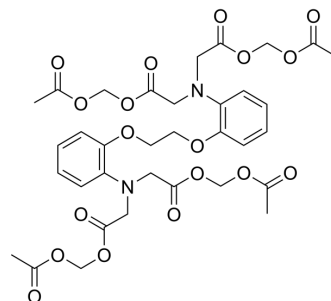
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## BAPTA-AM

|                    |  |       |         |
|--------------------|--|-------|---------|
| Cat. No.:          | HY-100545  |       |         |
| CAS No.:           | 126150-97-8  |       |         |
| Molecular Formula: | C <sub>34</sub> H <sub>40</sub> N <sub>2</sub> O <sub>18</sub> |       |         |
| Molecular Weight:  | 764.68   |       |         |
| Storage:           | Powder   | -20°C | 3 years |
|                    |  | 4°C   | 2 years |
|                    | In solvent   | -80°C | 2 years |
|                    |  | -20°C | 1 year  |



### SOLVENT & SOLUBILITY

|   |  |                          |           |           |           |            |
|---|--|--------------------------|-----------|-----------|-----------|------------|
| In Vitro  | DMSO : 50 mg/mL (65.39 mM; Need ultrasonic)  |                          |           |           |           |            |
|   | H <sub>2</sub> O : < 0.1 mg/mL (ultrasonic) (insoluble)  |                          |           |           |           |            |
|   | Preparing Stock Solutions  | Solvent<br>Concentration | Mass      | 1 mg      | 5 mg      | 10 mg      |
|   |  |                          | 1 mM      | 1.3077 mL | 6.5387 mL | 13.0774 mL |
|   |  |                          | 5 mM      | 0.2615 mL | 1.3077 mL | 2.6155 mL  |
| 10 mM   |  |                          | 0.1308 mL | 0.6539 mL | 1.3077 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<br>Solubility: ≥ 2.5 mg/mL (3.27 mM); Clear solution         |                          |           |           |           |            |
|   | 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)<br>Solubility: 2.5 mg/mL (3.27 mM); Suspended solution; Need ultrasonic |                          |           |           |           |            |
|   | 3. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (3.27 mM); Clear solution                                    |                          |           |           |           |            |

### BIOLOGICAL ACTIVITY

|                           |   |
|---------------------------|---|
| Description               | BAPTA-AM is a well-known membrane permeable Ca <sup>2+</sup> chelator. BAPTA-AM inhibits hERG channels, hKv1.3 and hKv1.5 channels in HEK 293 cells with IC <sub>50</sub> s of 1.3 μM, 1.45 μM and 1.23 μM, respectively <sup>[1]</sup> . |
| IC <sub>50</sub> & Target | Ca <sup>2+</sup> chelator <sup>[1]</sup><br>IC <sub>50</sub> : 1.3 μM (hERG channel, in HEK 293 cells), 1.45 μM (hKv1.3, in HEK 293 cells), 1.23 μM (hKv1.5, in HEK 293 cells) <sup>[1]</sup>   |
| In Vitro                  | BAPTA-AM inhibits neuronal Ca <sup>2+</sup> -activated K <sup>+</sup> channel currents, and up-regulates the decreased cardiac sodium current (I <sub>Na</sub> ) density by chelating intracellular Ca <sup>2+</sup> <sup>[1]</sup> .     |

BAPTA-AM (BAPTA/AM), an intracellular calcium chelator, induces delayed necrosis by lipoxygenase-mediated free radicals in mouse cortical cultures. BAPTA-AM prevents free radical-mediated toxicity promote apoptosis in non-neuronal cells and produce a beneficial effect in neuronal cells by protecting neurons from ischemic damage. In addition, it has been suggested that BAPTA-AM induces a late, but not early, increase of intracellular calcium in I-IL-60 neoplastic cells. Mixed cortical cell cultures (DIV 13-16) exposed to 10  $\mu$ M BAPTA-AM for 24- or 48-hr show moderate (45-70%) neuronal injury as evaluated by increased LDH release into the bathing medium after 24-48-hr. Exposure of cortical cultures to 3-10  $\mu$ M BAPTA-AM for 48-hr evoke dose-dependent neuronal damage<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

### Cell Assay <sup>[1]</sup>

Neuronal injury is quantitatively estimated by measuring lactate dehydrogenase (LDH) released from damaged cells into the bathing medium 24- or 48-hr after the 10  $\mu$ M BAPTA/AM treatment. The morphological findings are confirmed by staining with neuron-specific enolase (NSE) antibody and trypan blue<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2022 Feb 16;7(1):46.
- Nat Immunol. 2019 Apr;20(4):433-446.
- Cell Stem Cell. 2022 Oct 12;S1934-5909(22)00417-9.
- Nat Commun. 2023 Feb 6;14(1):642.
- Nat Commun. 2021 May 18;12(1):2915.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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