



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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### SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

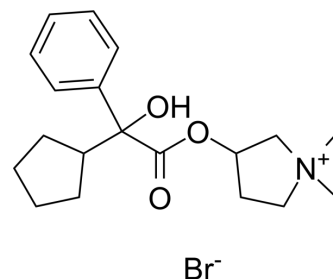
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## Glycopyrrolate

|                    |                                                                                                                                |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Cat. No.:          | HY-17465                                                                                                                       |
| CAS No.:           | 596-51-0                                                                                                                       |
| Molecular Formula: | C <sub>19</sub> H <sub>28</sub> BrNO <sub>3</sub>                                                                              |
| Molecular Weight:  | 398.33                                                                                                                         |
| Target:            | mAChR                                                                                                                          |
| Pathway:           | GPCR/G Protein; Neuronal Signaling                                                                                             |
| Storage:           | 4°C, sealed storage, away from moisture<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture) |



### SOLVENT & SOLUBILITY

|                                                                               |                                                                                                                                          |                                                      |           |            |            |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------|------------|------------|
| In Vitro                                                                      | H <sub>2</sub> O : 100 mg/mL (251.05 mM; Need ultrasonic)                                                                                |                                                      |           |            |            |
|                                                                               | DMSO : 100 mg/mL (251.05 mM; Need ultrasonic)                                                                                            |                                                      |           |            |            |
|                                                                               | Preparing Stock Solutions                                                                                                                | <div>Solvent<br/>Concentration</div> <div>Mass</div> | 1 mg      | 5 mg       | 10 mg      |
|                                                                               |                                                                                                                                          | 1 mM                                                 | 2.5105 mL | 12.5524 mL | 25.1048 mL |
|                                                                               |                                                                                                                                          | 5 mM                                                 | 0.5021 mL | 2.5105 mL  | 5.0210 mL  |
| 10 mM                                                                         |                                                                                                                                          | 0.2510 mL                                            | 1.2552 mL | 2.5105 mL  |            |
| Please refer to the solubility information to select the appropriate solvent. |                                                                                                                                          |                                                      |           |            |            |
| In Vivo                                                                       | 1. Add each solvent one by one: PBS<br>Solubility: 50 mg/mL (125.52 mM); Clear solution; Need ultrasonic                                 |                                                      |           |            |            |
|                                                                               | 2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline<br>Solubility: ≥ 2.5 mg/mL (6.28 mM); Clear solution |                                                      |           |            |            |
|                                                                               | 3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)<br>Solubility: ≥ 2.5 mg/mL (6.28 mM); Clear solution            |                                                      |           |            |            |
|                                                                               | 4. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (6.28 mM); Clear solution                            |                                                      |           |            |            |

### BIOLOGICAL ACTIVITY

|             |                                                                                                                                                                                                                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description | Glycopyrrolate (Glycopyrronium bromide), a quaternary ammonium derivative, is a muscarinic receptor antagonist. Glycopyrrolate has bronchoprotective effect and produces a beneficial effect on blood pressure. Glycopyrrolate can be used for the research of bronchial diseases <sup>[1][2][3]</sup> . |
| In Vitro    | Glycopyrrolate (1-10 nM, 30 min) has an effect of protecting large and small airways in guinea pig lung slices <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.                                                                          |

## In Vivo

Glycopyrrolate (0.005-0.01 mg/kg, Intravenous injection, single dose or give a second dose if heart rate (HR) < 70 beats/min ) produces a beneficial effect on blood pressure in anesthetized dogs<sup>[2]</sup>.

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

|                 |                                                                                                                            |
|-----------------|----------------------------------------------------------------------------------------------------------------------------|
| Animal Model:   | Anesthetized dogs <sup>[2]</sup>                                                                                           |
| Dosage:         | 0.005mg/kg, 0.01 mg/kg                                                                                                     |
| Administration: | Intravenous injection (i.v.)                                                                                               |
| Result:         | Resulted in a significant increase in HR.<br>Significant increased systolic, diastolic, and mean BP above baseline values. |

## CUSTOMER VALIDATION

- J Mol Struct. 18 June 2022, 133549.

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

## REFERENCES

- [1]. Maarsingh H, et al. Effects of (a Combination of) the Beta2-Adrenoceptor Agonist Indacaterol and the Muscarinic Receptor Antagonist Glycopyrrolate on Intrapulmonary Airway Constriction [J]. Cells, 2021, 10(5): 1237.
- [2]. Dyson D H, et al. Dose effect and benefits of glycopyrrolate in the treatment of bradycardia in anesthetized dogs [J]. The Canadian Veterinary Journal, 1999, 40(5): 327.
- [3]. Hansel T T, Neighbour H, Erin E M, et al. Glycopyrrolate causes prolonged bronchoprotection and bronchodilatation in patients with asthma [J]. Chest, 2005, 128(4): 1974-1979.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA