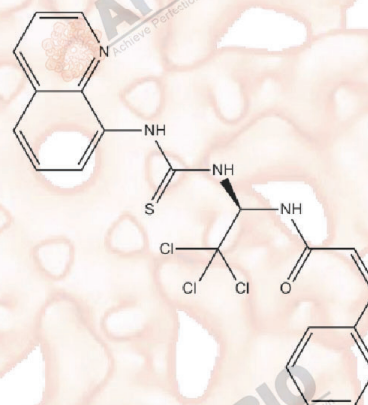


Product Data Sheet

Salubrial

| | |
|------------------|-------------------------------------------------------------------------------|
| Cat. No.: | B2025 |
| CAS No.: | 405060-95-9 |
| Formula: | C ₂₁ H ₁₇ Cl ₃ N ₄ O ₅ |
| M.Wt: | 479.81 |
| Synonyms: | |
| Target: | Others |
| Pathway: | eIF2α |
| Storage: | Store at -20°C |



Solvent & Solubility

≥48 mg/mL in DMSO; insoluble in H₂O; ≥2.2 mg/mL in EtOH with ultrasonic

In Vitro

| | Solvent | Mass Concentration | 1mg | 5mg | 10mg |
|---------------------------|---------|-----------------------|-----------|------------|------------|
| | | | | | |
| Preparing Stock Solutions | | 1 mM | 2.0842 mL | 10.4208 mL | 20.8416 mL |
| | | 5 mM | 0.4168 mL | 2.0842 mL | 4.1683 mL |
| | | 10 mM | 0.2084 mL | 1.0421 mL | 2.0842 mL |

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

Biological Activity

Shortsummary

Selective eIF2α inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: PC12 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: 0.5-100 μM for 36 hours

| | | |
|---------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| In Vivo | Applications: | Salubrinal inhibited eIF2α dephosphorylation mediated by a herpes simplex virus protein and blocked viral replication. Salubrinal dose-dependently protected PC12 cells against endoplasmic reticulum (ER) stress-induced apoptosis. Moreover, Salubrinal induced eIF2α phosphorylation and selectively inhibited eIF2α dephosphorylation. |
| | Animal experiment | |
| | Animal models: | Rat model; |
| | Dosage form: | 100 μM for 1-12 hours; i.c.v. administration |
| | Applications: | Salubrinal increased deep slow wave sleep and reduced active waking compared with the vehicle. Salubrinal increased expression of p-eIF2α in the basal forebrain (BF) area, a sleep-wake regulatory brain region [2]. Moreover, Salubrinal induced sleep by activating sleep-promoting neurons and inhibiting wake-promoting neurons in the basal forebrain (BF) and hypothalamus [3]. |
| | 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. Yang, Jian-wen, and Zhi-ping Hu. "Neuroprotective effects of atorvastatin against cerebral ischemia/reperfusion injury through the inhibition of endoplasmic reticulum stress." Neural Regeneration Research 10.8 (2015): 1239.

See more customer validations on www.apexbt.com.

References

- 1 Boyce, M., Bryant, K. F., Jousse, C., Long, K., Harding, H. P., Scheuner, D., Kaufman, R. J., Ma, D., Coen, D. M., Ron, D. and Yuan, J. (2005) A selective inhibitor of eIF2α phosphorylation protects cells from ER stress. Science. 307, 935-939
- 2 Methippara, M. M., Bashir, T., Kumar, S., Alam, N., Szymusiak, R. and McGinty, D. (2009) Salubrinal, an inhibitor of protein synthesis, promotes deep slow wave sleep. Am J Physiol Regul Integr Comp Physiol. 296, R178-184
- 3 Methippara, M., Mitrani, B., Schrader, F. X., Szymusiak, R. and McGinty, D. (2012) Salubrinal, an endoplasmic reticulum stress blocker, modulates sleep homeostasis and activation of sleep- and wake-regulatory neurons. Neuroscience. 209, 108-118

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. Short-term 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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