



# 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

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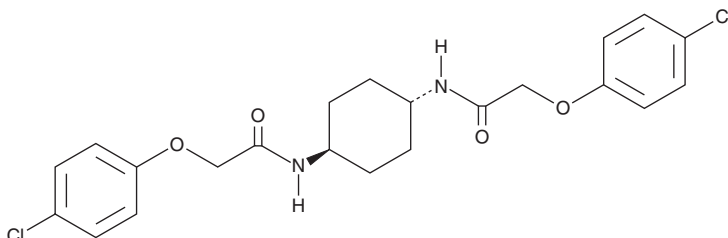
# PRODUCT INFORMATION



## *trans*-ISRIB

Item No. 16258

CAS Registry No.: 1597403-47-8  
Formal Name: N,N'-((1*r*,4*r*)-cyclohexane-1,4-diyl)  
bis(2-(4-chlorophenoxy)acetamide)  
MF: C<sub>22</sub>H<sub>24</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub>  
FW: 451.3  
Purity: ≥95%  
Stability: ≥2 years at -20°C  
Supplied as: A crystalline solid  
UV/Vis.: λ<sub>max</sub>: 226, 279 nm



### Laboratory Procedures

For long term storage, we suggest that *trans*-ISRIB be stored as supplied at -20°C. It should be stable for at least two years.

*trans*-ISRIB is supplied as a crystalline solid. A stock solution may be made by dissolving the *trans*-ISRIB in the solvent of choice. *trans*-ISRIB is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of *trans*-ISRIB in these solvents is approximately 2 mg/ml.

*trans*-ISRIB is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Phosphorylation of eIF2α by several kinases in response to cellular stress, including accumulation of unfolded proteins in the ER, results in a decrease in overall protein synthesis but upregulation of a small number of key regulatory proteins. *trans*-ISRIB (Integrated Stress Response Inhibitor) is a symmetric bis-glycolamide that inhibits the eIF2α phosphorylation-mediated unfolded protein response following induction of ER stress (IC<sub>50</sub> = 5 nM in a cell-reporter assay).<sup>1</sup> Although the mechanism of action is not established, it does not directly inhibit phosphorylation of eIF2α by upstream kinases. *trans*-ISRIB is able to pass through the blood-brain barrier and significantly enhances learning and memory in mice and rats.<sup>1</sup>

### Reference

1. Sidrauski, C., Acosta-Alvear, D., Khoutorsky, A., *et al.* Pharmacological brake-release of mRNA translation enhances cognitive memory. *Elife* 2, 1-22 (2013).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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