

Product Name: trans-ISRIB

Catalog No.: 5284

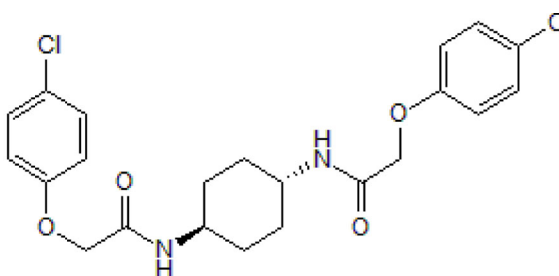
Batch No.: 3

CAS Number: 1597403-47-8

IUPAC Name: *N,N'*-trans-1,4-cyclohexanediylbis[2-(4-chlorophenoxy)acetamide]

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₄Cl₂N₂O₄
Batch Molecular Weight: 451.34
Physical Appearance: White solid
Solubility: DMSO to 10 mM with gentle warming
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	58.55	5.36	6.21
Found	58.77	5.37	6.16

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

trans-ISRIB is a potent integrated stress response (ISR) inhibitor; reverses the effects of eIF2 α phosphorylation (IC₅₀ = 5 nM) and restores cell translation capacity. Acts downstream of PERK, targeting interactions between eIF2 α kinases and eIF2B. Blocks ATF4 production without altering the IRE1 or ATF6 responses in vitro. Displays memory enhancement in hippocampus-dependent spatial and fear-associated learning in rodents. trans-ISRIB promotes survival of pluripotent stem cells in culture when used in combination with Chroman 1 (Cat. No. 7163), Emricasan (Cat. No. 7310), and Polyamine Supplement x1000 (lyophilized) (Cat. No. 7739)... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

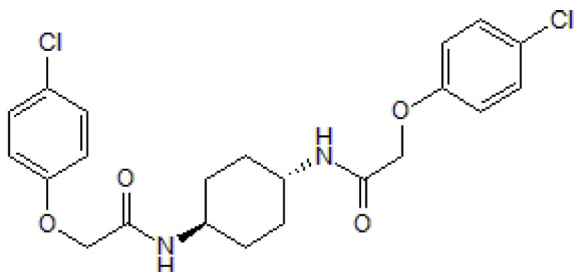
Batch Molecular Formula: C₂₂H₂₄Cl₂N₂O₄

Batch Molecular Weight: 451.34

Physical Appearance: White solid

Minimum Purity: \geq 99%

Batch Molecular Structure:



References:

Chen *et al* (2021) A versatile polypharmacology platform promotes cytoprotection and viability of human pluripotent and differentiated cells. *Nat.Methods* **18** 528. PMID: 33941937.

Hinnebusch (2015) Cell biology. Blocking stress response for better memory? *Science* **348** 967. PMID: 26023119.

Sekine *et al* (2015) Stress responses. Mutations in a translation initiation factor identify the target of a memory-enhancing compound. *Science* **348** 1027. PMID: 25858979.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 10 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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