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DATASHEET

Trans-ISRIB

Product overview

Name	Trans-ISRIB
Cat No	HB4567
Biological action	Inhibitor
Purity	>98%
Description	Integrated stress response (ISR) inhibitor. Promotes pluripotent stem cell survival as part of the CEPT cocktail.

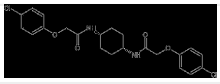
Biological Data

Biological description	Suppresses the integrated stress response (ISR) within a defined window of activation which makes cells resistant to eIF2α phosphorylation effects (IC_{50} = 5 nM). Also enhances long-term memory in rodent models. Promotes pluripotent stem cell survival as part of the CEPT cocktail which improves differentiated cell survival following cryopreservation.

Solubility & Handling

Solubility overview	Soluble in DMSO (10 mM with warming)
Storage instructions	+4°C
Storage of solutions	Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.
Shipping Conditions	Stable for ambient temperature shipping. Follow storage instructions on receipt.
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	N,N'-trans-1,4-cyclohexanediylbis[2-(4-chlorophenoxy)acetamide]
Molecular Weight	451.34
Chemical structure	
Molecular Formula	$C_{22}H_{24}Cl_2N_2O_4$
CAS Number	1597403-47-8
PubChem identifier	1011240
SMILES	C1CC(CCC1NC(=O)COC2=CC=C(C=C2)Cl)NC(=O)COC3=CC=C(C=C3)Cl
InChi	InChI=1S/C22H24Cl2N2O4/c23-15-1-9-19(10-2-15)29-13-21(27)25-17-5-7-18(8-6-17)26-22(28)14-30-20-11-3-16(24)4-12-20/h1-4,9-12,17-18H,5-8,13-14H2,(H,25,27)(H,26,28)
InChiKey	HJGMCDHQPXTGAV-UHFFFAOYSA-N

References

Small molecule ISRIB suppresses the integrated stress response within a defined window of activation.

Rabouw HH et al (2019) Proceedings of the National Academy of Sciences of the United States of America 116
PubMedID 30674674

ISRIB Blunts the Integrated Stress Response by Allosterically Antagonising the Inhibitory Effect of Phosphorylated eIF2 on eIF2B.

Zyryanova AF et al (2021) Molecular cell 81
PubMedID 33220178

The small molecule ISRIB reverses the effects of eIF2α phosphorylation on translation and stress granule assembly.

Sidrauski C et al (2015) eLife 4
PubMedID 25719440