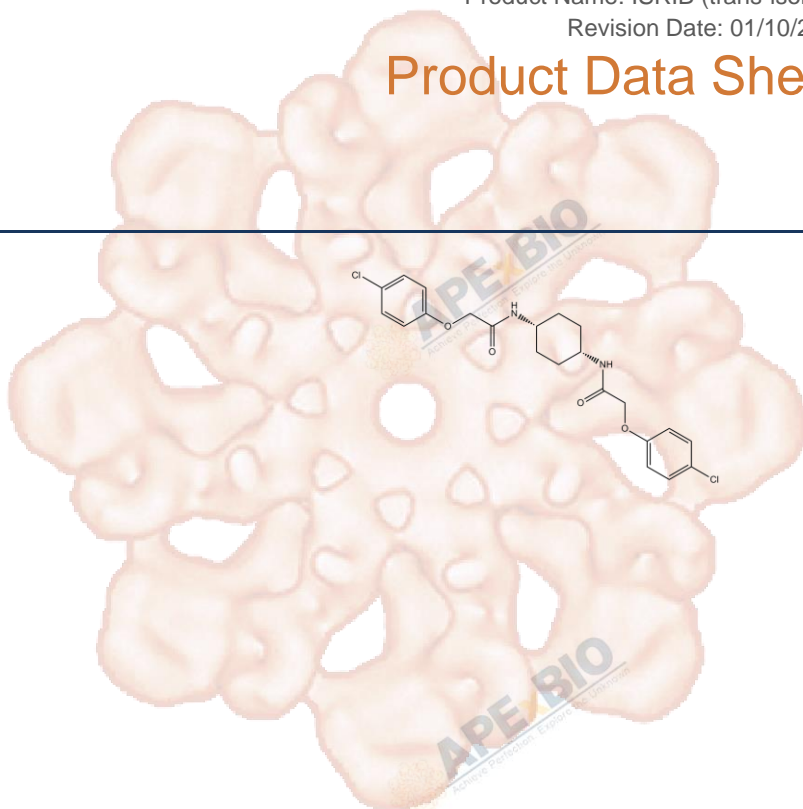


Product Data Sheet

ISRIB (trans-isomer)

Cat. No.:	B3699
CAS No.:	1597403-47-8
Formula:	C ₂₂ H ₂₄ Cl ₂ N ₂ O ₄
M.Wt:	451.34
Synonyms:	
Target:	Cell Cycle/Checkpoint
Pathway:	PERK
Storage:	Store at -20°C



Solvent & Solubility

insoluble in EtOH; insoluble in H₂O; insoluble in EtOH; ≥8.96 mg/mL in DMSO with gentle warming

In Vitro

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1mg	5mg	10mg
	1 mM		2.2156 mL	11.0781 mL	22.1562 mL
	5 mM		0.4431 mL	2.2156 mL	4.4312 mL
	10 mM		0.2216 mL	1.1078 mL	2.2156 mL

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

Biological Activity

Shortsummary

PERK inhibitor,potent and selective

IC₅₀ & Target

5 nM (PERK)

In Vitro

Cell Viability Assay

Cell Line: ER-stressed cells

Preparation method: The solubility of this compound in DMSO is >4.5 mg/mL. 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: 200 nM, 24 hr

	Applications:	ISRIB (trans-isomer) inhibited the ATF4-luciferase reporter with the IC50 of 5 nM. ISRIB (200 nM) blocked production of endogenous ATF4 in ER-stressed U2OS cells. ISRIB reduced the viability of cells subjected to PERK-activation by chronic endoplasmic reticulum stress. ISRIB (200 nM) sensitized HEK293T cells to acute ER stress. In Hela cells, ISRIB (25 nM) synergized with ER stress to activate caspase 3/7. In HEK293Trex cells carrying an inducible FLAG epitope-tagged ATF6, ATF6 cleavage was sustained in ER-stressed cells treated with ISRIB.
In Vivo	Animal experiment	
	Animal models:	Female CD-1 mice, male C57BL/6J mice
	Dosage form:	Intraperitoneal injection, 5 mg/kg
	Applications:	ISRIB-treated mice displayed significant enhancement in spatial and fear-associated learning. In female CD-1 mice, ISRIB (5 mg/kg) displayed a half-life in plasma of 8 hr and readily crossed the blood-brain barrier, quickly equilibrating with the central nervous system. In male C57BL/6J mice, systemic administration of ISRIB (intraperitoneally, 2.5 mg/kg) enhanced long-term contextual fear memory. ISRIB enhanced auditory fear conditioning in male Sprague Dawley rats.
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. Hongbo Zhang, Clarissa Read, et al. "A cytomegalovirus immunevasin triggers integrated stress 1 response-dependent reorganization of the endoplasmic reticulum." bioRxiv. 2019 May 17.

See more customer validations on www.apexbt.com.

References

[1]. Sidrauski C, Acosta-Alvear D, Khoutorsky A, et al. Pharmacological brake-release of mRNA translation enhances cognitive memory[J]. Elife, 2013, 2: e00498.

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. Shortterm 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.



APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

