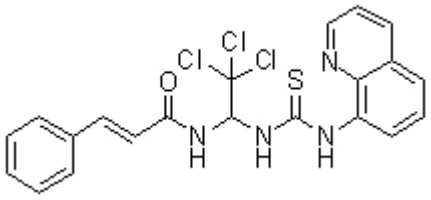
Product Introduction

Salubrinal

Salubrinal is a selective inhibitor of **eIF2α** dephosphorylation and inhibits **ER** stress-mediated apoptosis with **EC50** of ~15 μM.

Technical Data:

Molecular Weight (MW):	479.81	
Formula:	$C_{21}H_{17}Cl_3N_4OS$	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 96 mg/mL	
	Water <1 mg/mL	
	Ethanol 2 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	405060-95-9	

Biological Activity

Salubrinal is a selective inhibitor of cellular complexes that dephosphorylate eukaryotic translation initiation factor 2 subunit α (eIF2α). Salubrinal inhibited ER stress-mediated apoptosis induced by the protein glycosylation inhibitor tunicamycin (Tm) in a dose-dependent manner, with a median effective concentration (EC50) ~ 15 μM. Salubrinal also suppressed Tm-induced DNA fragmentation the processing of caspase-7, a caspase activated by ER stress. However, Salubrinal is not a general apoptosis inhibitor. Salubrinal induced rapid and robust eIF2α phosphorylation and its downstream effects in PC12

cells, including down-regulation of cyclin D1 and up-regulation of GADD34 and CHOP, two proteins whose expression is induced by eIF2α phosphorylation. Salubrinal inhibits eIF2α dephosphorylation by inhibiting the PP1/GADD34 complex. Salubrinal inhibits HSV replication with IC50 of ~ 3μM by inhibiting eIF2α dephosphorylation. [1] Salubrinal increased non-rapid eye movement (NREM) sleep. [2]

Salubrinal inhibits HSV replication in a mouse cornea infection model. Compared to vehicle control, topical Salubrinal treatment significantly reduced the viral titer recovered from eye swabs of infected animals. [1]

I.C.V. administration of Salubrinal significantly modified the homeostatic sleep response. [3]

References

[1] Boyce M, et al. Science, 2005, 307(5711), 935-939.

[2] Methippara MM, et al. Am J Physiol Regul Integr Comp Physiol, 2009, 296(1), 178-184.

[3] Methippara M, Neuroscience, 2012, 209, 108-118.

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