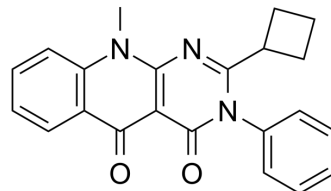


## SRI-41315

<b>Cat. No.:</b>	HY-150090		
<b>CAS No.:</b>	1613509-49-1		
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>19</sub> N <sub>3</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	357.41		
<b>Target:</b>	CFTR		
<b>Pathway:</b>	Membrane Transporter/Ion Channel		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 20.83 mg/mL (58.28 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.7979 mL	13.9895 mL	27.9791 mL
	5 mM	0.5596 mL	2.7979 mL	5.5958 mL
	10 mM	0.2798 mL	1.3990 mL	2.7979 mL

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

### BIOLOGICAL ACTIVITY

#### Description

SRI-41315 induces a prolonged pause at stop codons and suppresses PTCs (premature termination codons) associated with cystic fibrosis in immortalized and primary human bronchial epithelial cells, restoring CFTR (cystic fibrosis transmembrane conductance regulator) expression and function. SRI-41315 suppresses PTCs by reducing the abundance of the termination factor eRF1. SRI-41315 also potentiates aminoglycoside-mediated readthrough, leading to synergistic increases in CFTR activity<sup>[1]</sup>.

#### In Vitro

SRI-41315 exhibits target cell cytotoxicity (CC50) values >50 μM in both FRT and 16BE14o- cells<sup>[1]</sup>. SRI-41315 shows improved potency and efficacy in FRT cells that translated to 16HBE14o- cells<sup>[1]</sup>. SRI-41315 (5 μM, 20 h) depletes eRF1 levels through a proteasome-mediated degradation pathway<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis<sup>[1]</sup>

Cell Line: CFTR-G542X 16HBEge G542X cells

Concentration: 5 μM

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Incubation Time:	20 h
Result:	Depleted eRF1 levels through a proteasome-mediated degradation pathway. SRI-41315-mediated eRF1 degradation was prevented by the addition of (S)-MG132 but not the neddylation inhibitor MLN4924.

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## REFERENCES

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[1]. Sharma J, et al. A small molecule that induces translational readthrough of CFTR nonsense mutations by eRF1 depletion. Nat Commun. 2021 Jul 16;12(1):4358.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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