

Endoplasmic Reticulum Stress

The endoplasmic reticulum (ER) is tasked with the folding of secretory and transmembrane proteins along with the regulation of ER homeostasis. These processes involve several highly coordinated activities which include chaperoning, folding, quality control, and degradation mechanisms. Misfolded proteins are retained in the ER. When the misfolded protein burden becomes overwhelming, the condition results in ER stress. The cell has evolved to adapt to ER stress by engaging the unfolded protein response (UPR) pathway whose function is to restore protein homeostasis in the ER. If it fails, the UPR will trigger signals to kill the cell via apoptosis. UPR can have a profound effect on normal and pathophysiology.

Brefeldin A

ER stress inducer. A specific inhibitor of protein translocation from ER to Golgi.

Product No: 10-1071 5 mg/ 25 mg/

Thapsigargin

ER stress inducer. Potent inhibitor of sarcoplasmic reticulum Ca²⁺ ATPase.

Product No: 10-2105 1 mg/ 5 mg/

Tunicamycin

ER stress inducer. Inhibits GlucNAc phosphotransferase.

Product No: 10-2111 5 mg/ 25 mg/

4 μ 8C

ER stress inhibitor. IRE1 ribonuclease inhibitor

Product No: 10-1579 5 mg/ 25 mg/

TUDCA

A classic ER stress inhibitor. Reduces ER stress and adipose tissue inflammation in a mouse model of high fat diet-induced obesity.

Product No: 10-2782 500 mg/ 1 g/

Salubrinal

ER stress inhibitor acting via eIF2 α phosphatase inhibition.

Product No: 10-4517 5 mg/ 25 mg/

Toyocamycin

UPR inhibitor. Potently inhibits ER stress-induced XBP1 mRNA splicing.

Product No: 10-2750 5 mg/ 25 mg/

Azoramide

UPR inhibitor. Improves ER protein folding and activates ER chaperone capacity to protect cells against ER stress.

Product No: 10-4629 10 mg/ 50 mg/

Borrelidin

UPR inducer. Threonyl-tRNA synthetase inhibitor. Inhibits angiogenesis.

Product No: 10-1399 1 mg/ 5 mg/

Ceapin-A7

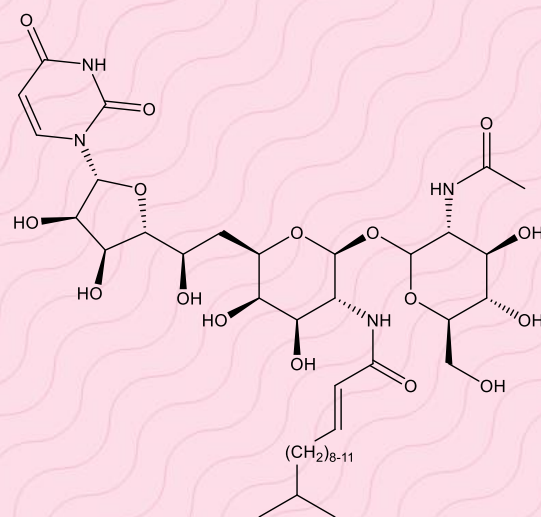
Selective inhibitor of transcription factor ATF6 α , one of the three branches of the unfolded protein response.

Product No: 10-3974 10 mg/ 50 mg/

AA147

Activator of the ER stress sensing protein ATF6.

Product No: 10-3973 10 mg/ 50 mg/



Tunicamycin

Applications:

- Cellular probes
- Cellular signaling
- Inhibitor development
- Drug discovery
- Analytical standard
- Chemical genomics
- Target validation
- Basic research

Contact us for:

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