

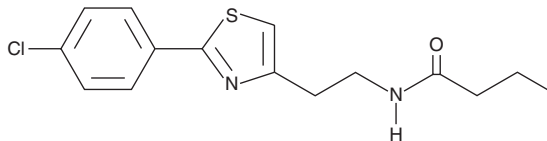
PRODUCT INFORMATION



Azoramide

Item No. 18045

CAS Registry No.: 932986-18-0
Formal Name: N-[2-[2-(4-chlorophenyl)-4-thiazolyl]ethyl]-butanamide
MF: C₁₅H₁₇ClN₂OS
FW: 308.8
Purity: ≥98%
UV/Vis.: λ_{max}: 301 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Azoramide is supplied as a crystalline solid. A stock solution may be made by dissolving the azoramide in the solvent of choice, which should be purged with an inert gas. Azoramide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of azoramide in these solvents is approximately 20 mg/ml.

Azoramide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, azoramide should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Azoramide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The unfolded protein response (UPR) maintains balance between protein synthesis and endoplasmic reticulum (ER) protein-folding by inhibiting translation to decrease global protein synthesis, increasing degradation and disposal of unfolded protein intermediates from the ER, and increasing the folding capacity of the ER by expanding its volume and increasing chaperone synthesis. Chronic ER stress leads to a defective UPR and is strongly associated with neurodegenerative diseases, cancers, and metabolic syndrome. Azoramide is a small molecule that has been shown to improve ER protein-folding ability by dose-dependently (1-25 μM) activating reporter genes whose expression is driven by the cellular UPR response element and the ER stress response element.¹ At 1-25 μM, this compound can also stimulate the expression of multiple chaperone proteins to enhance ER chaperone capacity and induce phosphorylation of eukaryotic translation initiation factor 2α subunit (eIF2α) to reduce protein synthesis.¹ At 150 mg/kg, azoramide exerts antidiabetic activity in both *ob/ob* and diet-induced obese mice, improving insulin sensitivity and glucose homeostasis, as well as protecting pancreatic β cells against ER stress.¹

Reference

1. Fu, S., Yalcin, A., Lee, G.Y., *et al.* Phenotypic assays identify azoramide as a small-molecule modulator of the unfolded protein response with antidiabetic activity. *Sci. Transl. Med.* **7(292)**, 292ra98 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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