

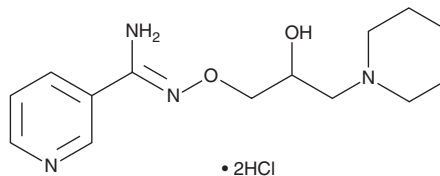
PRODUCT INFORMATION



BGP-15

Item No. 17503

CAS Registry No.: 66611-37-8
Formal Name: N-[2-hydroxy-3-(1-piperidinyl)propoxy]-3-pyridinecarboximidamide, dihydrochloride
MF: C₁₄H₂₂N₄O₂ • 2HCl
FW: 351.3
Purity: ≥95%
UV/Vis.: λ_{max}: 257, 277 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

BGP-15 is supplied as a crystalline solid. A stock solution may be made by dissolving the BGP-15 in the solvent of choice. BGP-15 is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 0.25 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of BGP-15 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of BGP-15 in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The poly(ADP-ribose) polymerases (PARPs) form a family of enzymes with roles in DNA repair and apoptosis.¹ BGP-15 is a PARP inhibitor and insulin sensitizer. In perfused heart, it blocks self-ADP-ribosylation of nuclear PARP (K_i = 57 μM) and mono-ADP-ribosylation of GRP78, resulting in decreased levels of reactive oxygen species, lipid peroxidation, and single-strand DNA breaks.^{2,3} BGP-15 acts as a co-inducer of heat shock protein 72, augmenting expression induced by heat shock factor 1 in adipocytes and skeletal muscles and improving insulin sensitivity.^{4,5}

References

1. Davar, D., Beumer, J.H., Hamieh, L., *et al.* Role of PARP inhibitors in cancer biology and therapy. *Curr. Med. Chem.* **19(23)**, 3907-3921 (2012).
2. Halmosi, R., Berente, Z., Osz, E., *et al.* Effect of poly(ADP-ribose) polymerase inhibitors on the ischemia-reperfusion-induced oxidative cell damage and mitochondrial metabolism in langendorff heart perfusion system. *Mol. Pharm.* **59(6)**, 1497-1505 (2001).
3. Szabados, E., Literati-Nagy, P., Farkas, B., *et al.* BGP-15, a nicotinic amidoxime derivate protecting heart from ischemia reperfusion injury through modulation of poly(ADP-ribose) polymerase. *Biochem. Pharmacol.* **59(8)**, 937-945 (2000).
4. Chung, J., Nguyen, A.-K., Henstridge, D.C., *et al.* HSP72 protects against obesity-induced insulin resistance. *Proc. Natl. Acad. Sci. USA* **105(5)**, 1739-1744 (2008).
5. Henstridge, D.C., Bruce, C.R., Drew, B.G., *et al.* Activating HSP72 in rodent skeletal muscle increases mitochondrial number and oxidative capacity and decreases insulin resistance. *Diabetes* **63**, 1881-1894 (2014).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/04/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM