

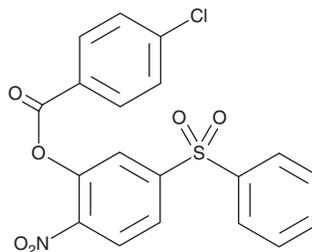
PRODUCT INFORMATION



BTB06584

Item No. 21032

CAS Registry No.: 219793-45-0
Formal Name: 4-chloro-benzoic acid, 2-nitro-5-(phenylsulfonyl)phenyl ester
Synonym: BTB
MF: C₁₉H₁₂ClNO₆S
FW: 417.8
Purity: ≥95%
UV/Vis.: λ_{max}: 248 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

BTB06584 (BTB) is supplied as a crystalline solid. A stock solution may be made by dissolving the BTB in the solvent of choice. BTB is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of BTB in these solvents is approximately 20 and 30 mg/ml, respectively.

BTB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BTB should first be dissolved in DMF and then diluted with the aqueous buffer of choice. BTB has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

BTB is an inhibitor of mitochondrial F₁F_o-ATP synthase (F₁F_o-ATPase) that has no effect on mitochondrial membrane potential ($\Delta\Psi_m$) or oxygen consumption.¹ It slows ATP consumption following inhibition of cellular respiration. BTB (100 μM) protects against ischemic cell death of HL-1 cells and rescues defective hemoglobin synthesis in pinotage (*pnt*) mutant zebrafish. BTB, in combination with ionizing radiation, increases apoptosis of A549 cells.²

References

1. Ivanec, F., Faccenda, D., Gatliff, J., *et al.* The compound BTB06584 is an F₁F_o-dependent selective inhibitor of the mitochondrial F₁F_o-ATPase. *Br. J. Pharmacol.* **171(18)**, 4193-4206 (2014).
2. Wang, Y., Hou, Q., Xiao, G., *et al.* Selective ATP hydrolysis inhibition in F₁F_o ATP synthase enhances radiosensitivity in non-small-cell lung cancer cells (A549). *Oncotarget* (2017).

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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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