

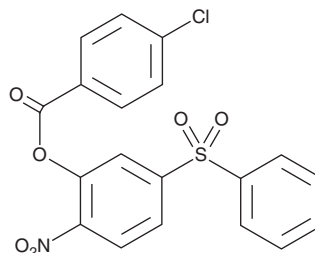
# PRODUCT INFORMATION



**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:** C<sub>19</sub>H<sub>12</sub>ClNO<sub>6</sub>S  
**FW:** 417.8  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 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 F<sub>1</sub>F<sub>0</sub>-ATP synthase (F<sub>1</sub>F<sub>0</sub>-ATPase) that has no effect on mitochondrial membrane potential ( $\Delta\Psi_m$ ) or oxygen consumption.<sup>1</sup> It slows ATP consumption following inhibition of cellular respiration. BTB (100  $\mu$ M) 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.<sup>2</sup>

## References

1. Ivanes, F., Faccenda, D., Gatliff, J., *et al.* The compound BTB06584 is an IF<sub>1</sub>-dependent selective inhibitor of the mitochondrial F<sub>1</sub> Fo-ATPase. *Br. J. Pharmacol.* **171**(18), 4193-4206 (2014).
2. Wang, Y., Hou, Q., Xiao, G., *et al.* Selective ATP hydrolysis inhibition in F1Fo 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.

### WARRANTY AND LIMITATION OF REMEDY

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