

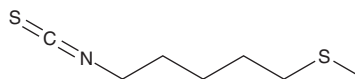
# PRODUCT INFORMATION



## Berteroin

Item No. 17880

**CAS Registry No.:** 4430-42-6  
**Formal Name:** 1-isothiocyanato-5-(methylthio)-pentane  
**Synonym:** 5-Methylthiopentyl isothiocyanate  
**MF:** C<sub>7</sub>H<sub>13</sub>NS<sub>2</sub>  
**FW:** 175.3  
**Purity:** ≥95%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Berteroin is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of berteroin in these solvents is approximately 16 and 3 mg/ml, respectively.

Berteroin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of berteroin should be diluted with the aqueous buffer of choice. The solubility of berteroin in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Berteroin is a sulforaphane (Item No. 10496) analog found in cruciferous vegetables including Chinese cabbage, rucola salad leaves, and mustard oil.<sup>1</sup> At 1.7 μM, it has been shown to double the phase II enzyme quinone reductase activity in mouse hepatoma cells.<sup>2</sup> Berteroin exerts anti-inflammatory activity in LPS-stimulated RAW 264.7 macrophages, inhibiting degradation of IκBα, as well as NF-κB p65 translocation to the nucleus and DNA binding activity.<sup>1</sup> It also suppresses IRAK degradation and phosphorylation of TAK1, p38 MAPK, ERK1/2, and Akt.<sup>1</sup>

### References

1. Jung, Y.J., Jung, J.I., Cho, H.J., *et al.* Berteroin present in cruciferous vegetables exerts potent anti-inflammatory properties in murine macrophages and mouse skin. *Int. J. Mol. Sci.* **15(11)**, 20686-20705 (2014).
2. Zhang, Y., Talalay, P., Cho, C.G., *et al.* A major inducer of anticarcinogenic protective enzymes from broccoli: Isolation and elucidation of structure. *Proc. Natl. Acad. Sci. USA* **89(6)**, 2399-2403 (1992).

#### 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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