

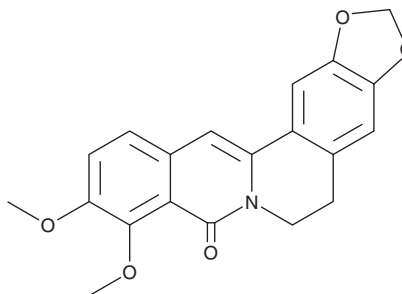
# PRODUCT INFORMATION



## Oxyberberine

Item No. 34384

**CAS Registry No.:** 549-21-3  
**Formal Name:** 5,6-dihydro-9,10-dimethoxy-8H-benzo[g]-1,3-benzodioxolo[5,6-a]quinolizin-8-one  
**Synonyms:** Berlambine, JKL 1073A, 8-Oxyberberine, NSC 93138  
**MF:** C<sub>20</sub>H<sub>17</sub>NO<sub>5</sub>  
**FW:** 351.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 225, 343 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Phellodendri chinensis* cortex



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

### Laboratory Procedures

Oxyberberine is supplied as a solid. A stock solution may be made by dissolving the oxyberberine in the solvent of choice, which should be purged with an inert gas. Oxyberberine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of oxyberberine in these solvents is approximately 10 mg/ml.

Oxyberberine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, oxyberberine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Oxyberberine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Oxyberberine is an alkaloid and a metabolite of the alkaloid berberine (Item No. 10006427) that has been found in *A. mexicana* and has diverse biological activities.<sup>1-3</sup> Oxyberberine is formed from berberine by gut microbiota.<sup>2</sup> It reduces viability of SW480 colon cancer cells when used at concentrations ranging from 1 to 200 µg/ml.<sup>1</sup> Oxyberberine (50 and 100 mg/kg) increases the ratio of phosphorylated to unphosphorylated PI3K, Akt, and GSK3β in isolated rat pancreatic tissue and reduces rat blood glucose levels in an oral glucose tolerance test in a model of diabetes induced by streptozotocin (STZ; Item No. 13104).<sup>2</sup> It also reduces inflammation and hepatosteatosis in a rat model of high-fat diet-induced non-alcoholic fatty liver disease (NAFLD).<sup>3</sup>

### References

1. Singh, S., Verma, M., Malhotra, M., *et al.* Cytotoxicity of alkaloids isolated from *Argemone mexicana* on SW480 human colon cancer cell line. *Pharm. Biol.* **54**(4), 740-745 (2016).
2. Dou, Y., Huang, R., Li, Q., *et al.* Oxyberberine, an absorbed metabolite of berberine, possess superior hypoglycemic effect via regulating the PI3K/Akt and Nrf2 signaling pathways. *Biomed. Pharmacother.* **137**, 111312 (2021).
3. Li, Q.-P., Dou, Y.-X., Huabg, Z.-W., *et al.* Therapeutic effect of oxyberberine on obese non-alcoholic fatty liver disease rats. *Phytomedicine* **85**, 153550 (2021).

#### 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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