



LKT Laboratories, Inc.

Berberine Chloride

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Product Information

Product ID B1870
CAS No. 633-65-8
Chemical Name

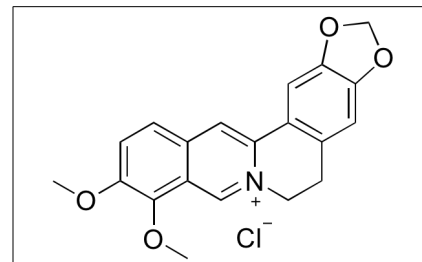
Synonym

Formula $C_{20}H_{18}NO_4 \cdot Cl$
Formula Wt. 371.82
Melting Point $200^{\circ}C$
Purity $\geq 97\%$
Solubility Soluble in boiling water.
Slightly soluble in cold water.
Soluble in methanol >20
mg/mL. Soluble in ethanol >2
mg/mL. Soluble in DMSO 74
mg/mL.

Store Temp Ambient

Ship Temp Ambient

Description Berberine is an isoquinoline alkaloid found in a variety of plants, including barberry, goldenseal, Oregon grape, California poppy, and the Amur cork tree. Berberine fluoresces under ultraviolet light and is often used to stain heparin in mast cells. Berberine displays many beneficial effects, including immunomodulatory, anticancer, anti-inflammatory, antiviral, lipid-lowering, and antidepressant activities. This compound is a competitive inhibitor of both acetylcholinesterase (AChE) and prolyl oligopeptidase, enzymes important in neuropsychiatric disorders such as Alzheimer's Disease, depression, schizophrenia, and anxiety. In animal models of depression, berberine increases levels of 5-HT, DA, and NE and is also thought to act on σ receptors. Berberine suppresses hedgehog (Hh) signaling, likely through inhibition of the Smoothed (Smo) receptor.



Bulk quantities available upon request

| Product ID | Size |
|------------|------|
| B1870 | 5 g |
| B1870 | 10 g |

References Wang J, Peng Y, Liu Y, et al. Berberine, a natural compound, suppresses Hedgehog signaling pathway activity and cancer growth. *BMC Cancer*. 2015 Aug 22;15:595.

Huang L, Shi A, He F, et al. Synthesis, biological evaluation, and molecular modeling of berberine derivatives as potent acetylcholinesterase inhibitors. *Bioorg Med Chem*. 2010 Feb;18(3):1244-51. PMID: 20056426.

Tarrago T, Kichik N, Seguí J, et al. The natural product berberine is a human prolyl oligopeptidase inhibitor. *ChemMedChem*. 2007 Mar;2(3):354-9. PMID: 17295371.

Kulkarni SK, Dhir A. Berberine: a plant alkaloid with therapeutic potential for central nervous system disorders. *Phytother Res*. 2010 Mar;24(3):317-24. PMID: 19998323.

Kulkarni SK, Dhir A. On the mechanism of antidepressant-like action of berberine chloride. *Eur J Pharmacol*. 2008 Jul 28;589(1-3):163-72. PMID: 18585703.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.