

## Tetrahydroberberine Datasheet

5<sup>th</sup> Edition (Revised in January, 2017)

### [ Product Information ]

**Name:** Tetrahydroberberine

**Catalog No.:** CFN90506

**Cas No.:** 522-97-4

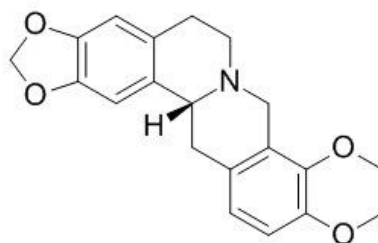
**Purity:** >=98%

**M.F:** C<sub>20</sub>H<sub>21</sub>O<sub>4</sub>N

**M.W:** 339.38

**Physical Description:** Cryst.

**Synonyms:** 5,8,13,13a-Tetrahydro-9,10-dimethoxy-6H-benzo[g]benzo-1,3-dioxolo[5,6-a]quinolizine.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

### [ Source ]

The barks of *Phellodendron chinense* Schneid.

### [ Biological Activity or Inhibitors ]

Tetrahydroberberine (THB), with D(2) receptor antagonist and 5-HT(1A) receptor agonist properties, enhances gastrointestinal motor function, has significant potential as a therapeutic for treatment of functional dyspepsia (FD).<sup>[1]</sup>

Tetrahydroberberine non-competitively inhibits the ACh-induced K<sup>+</sup> current in a concentration-dependent manner, and that this inhibitory effect provides further evidence that THB plays its pharmacological roles in the central nervous system by effects other than through blockade of dopamine receptors.<sup>[2]</sup>

Tetrahydroberberine has a potent antifibrillatory effect, which may be attributed to its blockade of potassium, calcium, and sodium currents. <sup>[3]</sup>

Tetrahydroberberine can protect the myocardium from ischemic and reperfusion injury.<sup>[4]</sup>

Tetrahydroberberine is a potent inhibitor of platelet aggregation in vitro and in vivo and is a promising antithrombotic drug.<sup>[5]</sup>

## **[ Solvent ]**

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

## **[ HPLC Method ]<sup>[6]</sup>**

Mobile phase: Methanol-Ethanol =80:20 ;

Flow rate: 0.4 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 230 nm.

## **[ Storage ]**

2-8°C, Protected from air and light, refrigerate or freeze.

## **[ References ]**

[1] Lee T H, Kim K H, Lee S O, *et al. J. Pharmacol. Exp. Ther.* ,2011,338(3):917-24.

[2] Wu J, Jin G Z. *Neurosci. Lett.*, 1997, 222(2):115-8.

- [3] Sun A Y, Li D X. *Acta Pharm.Sin.*, 1993, 14(4):301-5.
- [4] Zhou J, Xuan B, Li D X. *Acta Pharm.Sin.*, 1993, 14(2):130-3.
- [5] Xuan B, Wang W, Li D X. *Acta Pharm. Sin.*, 1994, 15(2):133-5.
- [6] Zhang Y, Shi K, Wen J, *et al.* *Chirality*, 2012, 24(3):239-44.

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