

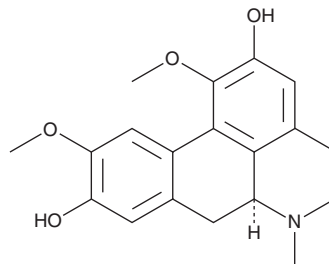
# PRODUCT INFORMATION



## Boldine

Item No. 18447

**CAS Registry No.:** 476-70-0  
**Formal Name:** 5,6,6aS,7-tetrahydro-1,10-dimethoxy-6-methyl-4H-dibenzo[de,g]quinoline-2,9-diol  
**Synonyms:** (+)-(S)-Boldine, 2,9-Dihydroxy-1,10-dimethoxyaporphine, NSC 65689  
**MF:** C<sub>19</sub>H<sub>21</sub>NO<sub>4</sub>  
**FW:** 327.4  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 216, 282, 303 nm  
**Supplied as:** A crystalline solid  
**Storage:** ≥-20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Boldine is supplied as a crystalline solid. A stock solution may be made by dissolving the boldine in the solvent of choice, which should be purged with an inert gas. Boldine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of boldine in ethanol is approximately 30 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Boldine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, boldine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Boldine has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Boldine is an alkaloid that has been found in *P. boldus* and has diverse biological activities.<sup>1-4</sup> It completely inhibits *tert*-butyl hydroperoxide-induced lipid peroxidation and cell death in isolated rat hepatocytes when used at a concentration of 200 μM.<sup>1</sup> Boldine reduces copper- and peroxidase-induced LDL oxidation *in vitro* in a concentration-dependent manner.<sup>2</sup> *In vivo*, boldine (1 mg/animal per day) reduces the number and area of aortic atherosclerotic lesions in LDL receptor knockout (*LDLR*<sup>-/-</sup>) mice fed an atherogenic diet. It reduces carrageenan-induced paw edema in guinea pigs (ED<sub>50</sub> = 43 mg/kg) and reduces bacterial pyrogen-induced hyperthermia in rabbits when administered at a dose of 60 mg/kg.<sup>3</sup> Boldine (25 and 50 mg/kg) increases the latency to myoclonic and clonic seizures in a mouse model of seizures induced by pentylenetetrazole (PTZ; Item No. 18682).<sup>4</sup> It also decreases electroshock-induced tonic hindlimb extension in mice.

### References

1. Bannach, R., Valenzuela, A., Cassels, B.K., *et al.* *Cell Biol. Toxicol.* **12**(2), 89-100 (1996).
2. Santanam, N., Penumetcha, M., Speisky, H., *et al.* *Atherosclerosis* **173**(2), 203-210 (2004).
3. Backhouse, N., Delporte, C., Givernau, M., *et al.* *Agents Actions* **42**(3-4), 114-117 (1994).
4. Moezi, L., Yahosseini, S., Jamshizadeh, A., *et al.* *Drug Res. (Stuttg.)* **69**(4), 227-233 (2019).

#### 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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