**PRODUCT INFORMATION**

**Ebastine**

*Item No. 15372*

**CAS Registry No.:** 90729-43-4  
**Formal Name:** 1-[4-(1,1-dimethylethyl)phenyl]-4-[4-(diphenylmethoxy)-1-piperidinyl]-1-butanone  
**Synonyms:** LAS-W 090, RP 64305  
**MF:** C$_{32}$H$_{39}$NO$_2$  
**FW:** 469.7  
**Purity:** ≥98%  
**UV/Vis.:** $\lambda_{\text{max}}$: 252 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

**Laboratory Procedures**

Ebastine is supplied as a crystalline solid. A stock solution may be made by dissolving the ebastine in the solvent of choice. Ebastine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ebastine in ethanol and DMSO is approximately 2 mg/ml and approximately 25 mg/ml in DMF.

Ebastine is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

**Description**

Ebastine is a potent second generation histamine H$_1$ receptor antagonist (K$_i$ = 0.4 nM; IC$_{50}$ = 45 nM) that does not cross the blood brain barrier. It undergoes extensive first-pass metabolism by hepatic cytochrome P450 3A4 into its active carboxylic acid metabolite, carebastine, which exerts most of the pharmacological effects. At 10 $\mu$M, ebastine has been shown to inhibit T cell proliferation and the production of Th2-type pro-inflammatory cytokines by macrophages.

**References**