



LKT Laboratories, Inc.

Piperine

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Product Information

Product ID P3465

CAS No. 94-62-2

Chemical Name 1-[(2E,4E)-5-(1,3-Benzodioxol-5-yl)-1-oxo-2,4-pentadienyl] piperidine

Synonym (E,E)-1-Piperoylpiperidine

Formula C₁₇H₁₉NO₃

Formula Wt. 285.34

Melting Point 129-131 °C

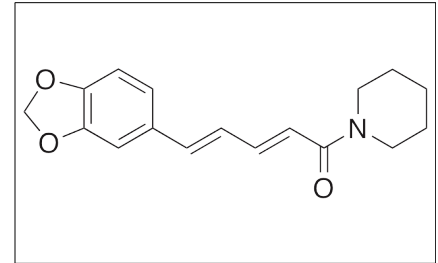
Purity ≥95%

Solubility Soluble in alcohol, chloroform, ether, benzene or acetic acid.

Store Temp Ambient

Ship Temp Ambient

Description Piperine is an alkaloid originally found in several species of black and long peppers. Piperine exhibits anticancer, anti-diabetic, immunomodulatory, antioxidative, anti-inflammatory, cognition enhancing, and neuroprotective activities. In prostate cancer cells, piperine induces cell cycle arrest and autophagy by increasing levels of p21 and p27 and decreasing levels of cyclin D1 and cyclin A. In animal models, piperine decreases blood glucose levels. In LPS-treated dendritic cells, piperine inhibits expression of CD40 and CD86, suppresses production of IL-12 and TNF- α , and prevents activation of ERK and JNK. In animal models of Alzheimer's disease, this compound improves memory impairment and neurodegeneration. In animal models of Parkinson's disease, piperine decreases 6-OHDA-induced lipid peroxidation, decreases levels of TNF- α and IL-1 β , and increases levels of glutathione, resulting in improvements in motor coordination and balance. Piperine also activates transient receptor potential vanilloid 1 (TRPV1) channels.



Bulk quantities available upon request

Product ID	Size
P3465	1 g
P3465	5 g

References Ouyang DY, Zeng LH, Pan H, et al. Piperine inhibits the proliferation of human prostate cancer cells via induction of cell cycle arrest and autophagy. *Food Chem Toxicol.* 2013 Oct;60:424-30. PMID: 23939040.

Kumar S, Sharma S, Vasudeva N. Screening of antidiabetic and antihyperlipidemic potential of oil from *Piper longum* and piperine with their possible mechanism. *Expert Opin Pharmacother.* 2013 Sep;14(13):1723-36. PMID: 23875561.

Shrivastava P, Vaibhav K, Tabassum R, et al. Anti-apoptotic and anti-inflammatory effect of Piperine on 6-OHDA induced Parkinson's rat model. *J Nutr Biochem.* 2013 Apr;24(4):680-7. PMID: 22819561.

Bae GS, Kim JJ, Park KC, et al. Piperine inhibits lipopolysaccharide-induced maturation of bone-marrow-derived dendritic cells through inhibition of ERK and JNK activation. *Phytother Res.* 2012 Dec;26(12):1893-7. PMID: 22430952.

Chonpathompikunlert P, Wattanathorn J, Muchimapura S. Piperine, the main alkaloid of Thai black pepper, protects against neurodegeneration and cognitive impairment in animal model of cognitive deficit like condition of Alzheimer's disease. *Food Chem Toxicol.* 2010 Mar;48(3):798-802. PMID: 20034530.

Fofaria NM, Kim SH, Srivastava SK. Piperine causes G1 phase cell cycle arrest and apoptosis in melanoma cells through checkpoint kinase-1 activation. *PLoS One.* 2014 May 7;9(5):e94298. PMID: 24804719.

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