LKT Laboratories, Inc.

Benfotiamine

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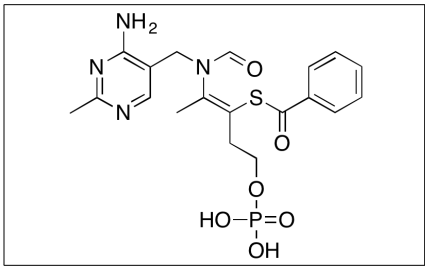
Product Information

Product ID B1753
CAS No. 22457-89-2
Chemical Name S-Benzoylthiamine O-monophosphate

Synonym

Formula $C_{19}H_{23}N_4O_6PS$
Formula Wt. 466.453
Melting Point ~200°C
Purity ≥98%
Solubility



Bulk quanitites available upon request

Product ID	Size
B1753	250 mg
B1753	1 g
B1753	5 g

Store Temp Ambient
Ship Temp Ambient

Description Benfotiamine is a synthetic, lipid-soluble derivative of the B vitamin thiamine. Benfotiamine exhibits antinociceptive, neuroprotective, and anti-inflammatory activities. In animal models, benfotiamine inhibits pain signaling in a prostatic acid phosphatase-dependent manner. In vitro, benfotiamine decreases production of amyloid-β (Aß) and downregulates activity of glycogen synthase kinase 3 (GSK3). In macrophages, this compound inhibits LPS-induced activation of phospholipase A2 (PLA2), release of leukotrienes, prostaglandins, and thromboxane B2 (TxB2), and also suppresses oxidative stress. Benfotiamine also decreases oxidative stress induced by streptozocin in animal models.

References

Hurt JK, Coleman JL, Fitzpatrick BJ, et al. Prostatic acid phosphatase is required for the antinociceptive effects of thiamine and benfotiamine. PLoS One. 2012;7(10):e48562. PMID: 23119057.

Sun XJ, Zhao L, Zhao N, et al. Benfotiamine prevents increased ß-amyloid production in HEK cells induced by high glucose. Neurosci Bull. 2012 Oct;28(5):561-6. PMID: 22961478.

Shoeb M, Ramana KV. Anti-inflammatory effects of benfotiamine are mediated through the regulation of the arachidonic acid pathway in macrophages. Free Radic Biol Med. 2012 Jan 1;52(1):182-90. PMID: 22067901.

Wu S, Ren J. Benfotiamine alleviates diabetes-induced cerebral oxidative damage independent of advanced glycation end-product, tissue factor and TNF-alpha. Neurosci Lett. 2006 Feb 13;394(2):158-62. PMID: 16260089.