



LKT Laboratories, Inc.

Benzyl Isothiocyanate

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Product Information

Product ID B1653
CAS No. 622-78-6
Chemical Name Benzene, (isothiocyanatomethyl)-

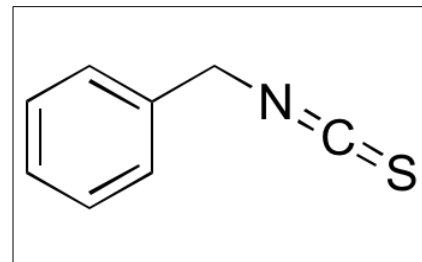
Synonym Isothiocyanic acid benzyl ester, 2-Bromo-4-trifluoro- methyl-6-nitrophenyl-
isothiocyanate

Formula C₈H₇NS
Formula Wt. 149.22

Melting Point

Purity ≥99%

Solubility Soluble in DMSO, ethanol, chloroform.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
B1653	5 g	\$62.60
B1653	10 g	\$111.00

Store Temp 4°C

Ship Temp Ambient

Description Benzyl isothiocyanate (BITC) is an isothiocyanate originally found in cruciferous vegetables that exhibits immunomodulatory, anti-parasitic, antibiotic, antioxidative, anti-atherosclerotic, anti-angiogenic, anti-metastatic, anticancer chemotherapeutic, and chemopreventive activities. BITC inhibits IL-13 expression in basophils. BITC induces phase II enzymes, increasing levels of heme oxygenase 1 (HO-1), glutathione, and glutamate cysteine ligase; it also decreases levels of ROS, activation of NF-κB, adhesion of monocytes, and expression of ICAM-1, VCAM-1, and E-selectin. This compound inhibits growth of *Trypanosoma* and displays antibacterial efficacy against *Campylobacter* by disrupting metabolic processes. In vitro and in vivo, BITC decreases high fat diet-induced tumor growth and multiplicity, also inhibiting macrophage migration and lipid droplet accumulation. This compound inhibits squamous cell carcinoma cell invasion and migration and induces apoptosis and autophagy in prostate cancer cells. In various animal models, BITC inhibits development of mammary gland tumors and decreases activation of STAT3 and secretion of VEGF, MMP-2, and HIF-1α.

References Tang Y, Abe N, Yoshimoto M, et al. Benzyl isothiocyanate inhibits IL-13 expression in human basophilic KU812 cells. *Biosci Biotechnol Biochem*. 2014 Sep 25:1-5. PMID: 25253661.

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