



# LKT Laboratories, Inc.

## 3,3'-Diindolymethane

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### Product Information

Product ID D3232

CAS No. 1968-05-4

#### Chemical Name

Synonym 3,3'-Diindolymethane, 3,3'-Methylenebis-1H-indole, DIM

Formula  $C_{17}H_{14}N_2$

Formula Wt. 246.31

Melting Point 163-165°C

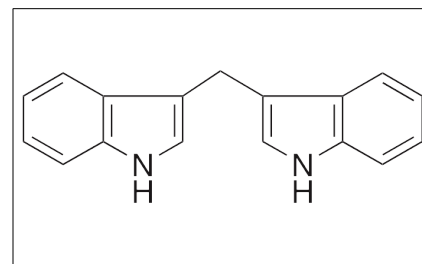
Purity ≥98%

Solubility Soluble in DMSO (200 mg/mL). Insoluble in water.

Store Temp Ambient

Ship Temp Ambient

**Description** 3,3'-Diindolymethane (DIM) is found in cruciferous vegetables; it exhibits anti-inflammatory, immunosuppressive, antioxidative, anti-diabetic, anti-fibrotic, anti-metastatic, anticancer chemotherapeutic, and chemopreventive activities. DIM acts as an agonist at the aryl hydrocarbon receptor. DIM increases levels of Foxp3 and function of Treg cells and decreases expression of toll-like receptor 4 (TLR4) and Th17 cells, preventing hepatic steatosis and inflammation in vivo. DIM also prevents the development of experimental autoimmune encephalitis (EAE) by suppressing T cell activity. In vivo, this compound decreases glucose levels, insulin levels, and Hb1Ac by increasing activity of glucokinase and glucose-6-phosphate dehydrogenase and decreasing activity of glucose-6-phosphatase and fructose-1,6-bisphosphatase. DIM also prevents the development of liver fibrosis in vivo. In cellular and animal models of nasopharyngeal carcinoma, DIM inhibits cellular invasion and metastasis and tumor growth; it also decreases activity of HDAC2. TEST!!!!!!



### Pricing and Availability

**Bulk quantities available upon request**

Product ID	Size	List Price
D3232	1 g	\$37.80
D3232	5 g	\$118.40
D3232	10 g	\$207.30

**References** Liu Y, She W, Wang F, et al. 3, 3'-diindolymethane alleviates steatosis and the progression of NASH partly through shifting the imbalance of Treg/Th17 cells to Treg dominance. *Int Immunopharmacol.* 2014 Oct 1. [Epub ahead of print]. PMID: 25281898.

Rouse M, Rao R, Nagarkatti M, et al. 3,3'-diindolymethane ameliorates experimental autoimmune encephalomyelitis by promoting cell cycle arrest and apoptosis in activated T cells through microRNA signaling pathways. *J Pharmacol Exp Ther.* 2014 Aug;350(2):341-52. PMID: 24898268.

Wu T, Chen C, Li F, et al. 3,3'-Diindolymethane inhibits the invasion and metastasis of nasopharyngeal carcinoma cells in vitro and in vivo by regulation of epithelial mesenchymal transition. *Exp Ther Med.* 2014 Jun;7(6):1635-1638. PMID: 24926357.

Poornima J, Mirunalini S. Regulation of carbohydrate metabolism by indole-3-carbinol and its metabolite 3,3'-diindolymethane in high-fat diet-induced C57BL/6J mice. *Mol Cell Biochem.* 2014 Jan;385(1-2):7-15. PMID: 24072613.

Zhang Z, Gao Z, Hu W, et al. 3,3'-Diindolymethane ameliorates experimental hepatic fibrosis via inhibiting miR-21 expression. *Br J Pharmacol.* 2013 Oct;170(3):649-60. PMID: 23902531.

Chen C, Chen SM, Xu B, et al. In vivo and in vitro study on the role of 3,3'-diindolymethane in treatment and prevention of nasopharyngeal carcinoma. *Carcinogenesis.* 2013 Aug;34(8):1815-21. PMID: 23568953.

Beaver LM, Yu TW, Sokolowski EI, et al. 3,3'-Diindolymethane, but not indole-3-carbinol, inhibits histone deacetylase activity

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