



LKT Laboratories, Inc.

## O6-Benzylguanine

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### Product Information

Product ID B1855

CAS No. 19916-73-5

Chemical Name

Synonym

Formula  $C_{12}H_{11}N_5O$

Formula Wt. 241.25

Melting Point

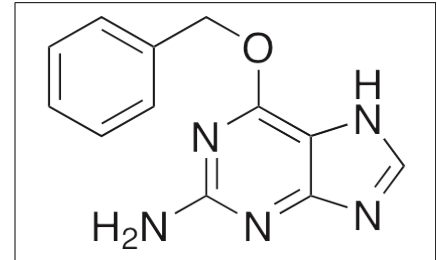
Purity  $\geq 98\%$

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** O6-Benzylguanine (O6-BG) is a synthetic derivative of guanine often used to examine DNA repair mechanisms. O6-BG acts as an inhibitor of O6-methylguanine DNA methyltransferase (MGMT), an enzyme that repairs damage to guanine residues in DNA. As many alkylating and cross-linking chemotherapeutics act on guanine residues to induce DNA damage in cancer cells, O6-BG prevents the repair of the damaged DNA, allowing apoptosis and other mechanisms of cell death to occur. In animals and humans, O6-BG shows some benefit in improving efficacy of co-administered treatments, potentially increasing survival time. This compound is currently in clinical trials examining its anticancer chemotherapeutic potential.



**Bulk quantities available upon request**

| Product ID | Size   |
|------------|--------|
| B1855      | 50 mg  |
| B1855      | 250 mg |
| B1855      | 1 g    |

**References** Qian L, Zheng J, Wang K, et al. Cationic core-shell nanoparticles with carmustine contained within O6-benzylguanine shell for glioma therapy. *Biomaterials*. 2013 Nov;34(35):8968-78. PMID: 23953782.

Quinn JA, Jiang SX, Reardon DA, et al. Phase II trial of temozolomide plus O6-benzylguanine in adults with recurrent, temozolomide-resistant malignant glioma. *J Clin Oncol*. 2009 Mar 10;27(8):1262-7. PMID: 19204199.

Quinn JA, Jiang SX, Carter J, et al. Phase II trial of Gliadel plus O6-benzylguanine in adults with recurrent glioblastoma multiforme. *Clin Cancer Res*. 2009 Feb 1;15(3):1064-8. PMID: 19188181.

Friedman HS, Keir S, Pegg AE, et al. O6-benzylguanine-mediated enhancement of chemotherapy. *Mol Cancer Ther*. 2002 Sep;1(11):943-8. PMID: 12481416.

Friedman HS, Pluda J, Quinn JA, et al. Phase I trial of carmustine plus O6-benzylguanine for patients with recurrent or progressive malignant glioma. *J Clin Oncol*. 2000 Oct 15;18(20):3522-8. PMID: 11032594.

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