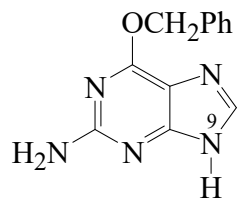




>>Entry Name: **6-*O*-Benzylguanine**

Synonym(s): 6-(Phenylmethoxy)-1*H*-purin-2-amine, 9Cl. 2-Amino-6-(benzyloxy)purine, 8Cl. NSC 637037



CAS Registry Number: 19916-73-5

Molecular Formula: C₁₂H₁₁N₅O

Molecular Weight: 241.252

Accurate Mass: 241.09636

Percentage Composition: C 59.74%; H 4.60%; N 29.03%; O 6.63%

General Statement: 9*H*-form illus. The CAS name and no. refer to the (prob. unfavoured) 1*H*-form

Biological Use/Importance: Potent inhibitor of *O*⁶-alkylguanine-DNA alkyltransferase activity. Increases the chemotherapeutic effectiveness of chloroethylating agents

Physical Description: Needles (EtOH aq.)

Melting Point: Mp 204-206°

References:

- Bowles, W.A. *et al.*, *J. Med. Chem.*, 1963, **6**, 471-480, (*synth*)
Robins, M.J. *et al.*, *J.O.C.*, 1969, **34**, 2160-2163, (*synth, uv*)
MacCoss, M. *et al.*, *Tet. Lett.*, 1985, **26**, 1815-1818, (*synth, pmr*)
Dolan, M.E. *et al.*, *Proc. Natl. Acad. Sci. U.S.A.*, 1990, **87**, 5368-5372, (*activity*)
Marathi, U.K. *et al.*, *Biochem. Pharmacol.*, 1994, **48**, 2127-2134, (*pharmacol*)
Dolan, M.E. *et al.*, *Cancer Res.*, 1994, **54**, 5123-5130, (*metab*)
Roy, S.K. *et al.*, *Drug Metab. Dispos.*, 1995, **23**, 1394-1399, (*pharmacokinet*)
Pegg, A.E. *et al.*, *Prog. Nucleic Acid Res. Mol. Biol.*, 1995, **51**, 167-223, (*rev*)
Stefan, T.L. *et al.*, *J. Chromatogr., B: Biomed. Appl.*, 1997, **704**, 289-298, (*hplc*)
Dolan, M.E. *et al.*, *Biochem. Pharmacol.*, 1998, **55**, 1701-1709, (*prodrugs*)
Dolan, M.E. *et al.*, *J. Clin. Oncol.*, 1998, **16**, 1803-1810, (*hplc, metab, pharmacokinet*)