Carboplatin

Product Number C 2538
Store at Room Temperature

Product Description
Molecular Formula: C₆H₁₂N₂O₄Pt
Molecular Weight: 371.3
CAS Number: 41575-94-4
Synonym: cis-diammine (1,1-cyclobutanedicarboxylato) platinum, (SP-4-2)-diammine[1,1-cyclobutanedicarboxylato (2-)-O,O']platinum

Carboplatin is a platinum coordination compound and antineoplastic agent that is related to cisplatin. It exerts its effects by covalent reaction with DNA to produce interstrand and intrastrand DNA crosslinks, and DNA-protein crosslinks. From in vitro studies on isolated DNA and CHO cells, the adducts formed from the reaction of carboplatin with DNA include the intrastrand cross-link cis-Pt(NH₃)₂d(pGpG) (Pt-GG), cis-Pt-(NH₃)₂d(pApG) (Pt-AG), cis-Pt(NH₃)₂d(GMP)₂ (G-Pt-G), and monofunctionally bound platinum (cis-Pt(NH₃)₃dGMP (Pt-G)).

A comparison of the sequence specificity of the interaction of various cisplatin analogues with DNA, including carboplatin, has been performed. A study of γ-glutamyltransferase overexpression in carboplatin-treated HeLa cells, with relation to cell defense mechanisms, has been reported. Mouse peritoneal macrophages treated with carboplatin have been shown to produce enhanced IL-1α and TNF-α levels in tissue culture supernatants. A 96 well assay study of the action of carboplatin on 10 human ovarian cancer cell lines has been described.

An analysis of the principal adducts of carboplatin with DNA by capillary electrophoresis and laser-induced fluorescence detection has been published. An HPLC-MS method for the analysis of carboplatin from rat plasma ultrafiltrate and tumor tissue has been described.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in water (10 mg/ml), yielding a clear, colorless solution.

References
1. The Merck Index, 12th ed., Entry# 1870.


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