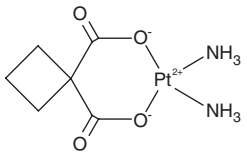
PRODUCT INFORMATION

Carboplatin

Item No. 13112

CAS Registry No.: 41575-94-4
Formal Name: (SP-4-2)-diammine[1,1-cyclobutanedicarboxylato(2-)-κO,κO'']-platinum
Synonyms: CBDCA, CDDCA, *cis*-Diammine(1,1-cyclobutanedicarboxylato)platinum(II), NSC 201345, NSC 241240
MF: $C_6H_{12}N_2O_4Pt$
FW: 371.3
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Carboplatin is supplied as a crystalline solid. Aqueous solutions of carboplatin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of carboplatin in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Carboplatin is a platinum-containing DNA-crosslinking agent.[1] It induces the formation of DNA interstrand crosslinks and DNA-protein crosslinks when used at concentrations of 200 and 300 µM. It inhibits the proliferation of GLC-4 small cell lung carcinoma and A2780 and SKOV3 ovarian cancer cells (IC_{50}s = 22.7, 0.5, and 10.2 µM, respectively).[2,3] Carboplatin reduces tumor growth in an ADJ/PC6 murine plasmacytoma model (ED_{90} = 0.6 mg/kg, i.p.).[4] Formulations containing carboplatin have been used in the treatment of ovarian cancer.

References

1. Micetich, K.C., Barnes, D., and Erickson, L.C. A comparative study of the cytotoxicity and DNA-damaging effects of *cis*-(diammino)(1,1-cyclobutanedicarboxylato)-platinum(II) and *cis*-diamminedichloroplatinum(II) on L1210 cells. *Cancer Res.* **45(9)**, 4043-4047 (1985).
2. Groen, H.J., Sleijfer, S., Meijer, C., *et al.* Carboplatin- and cisplatin-induced potentiation of moderate-dose radiation cytotoxicity in human lung cancer cell lines. *Br. J. Cancer* **72(6)**, 1406-1411 (1995).
3. Al-Eisawi, Z., Beale, P., Chan, C., *et al.* Carboplatin and oxaliplatin in sequenced combination with bortezomib in ovarian tumour models. *J. Ovarian Res.* **6(1)**, 78 (2013).
4. Kelland, L.R., Abel, G., McKeage, M.J., *et al.* Preclinical antitumor evaluation of bis-acetato-ammine-dichloro-cyclohexylamine platinum(IV): An orally active platinum drug. *Cancer Res.* **53(11)**, 2581-2586 (1993).

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