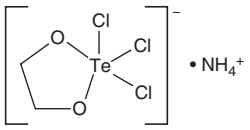
PRODUCT INFORMATION

AS-101

Item No. 21443

CAS Registry No.: 106566-58-9
Formal Name: (SP-5-22)-trichloro[1,2-ethanediolato(2-)-κO[1],κO[2]]-tellurate(1-), monoammonium salt
MF: $C_2H_4Cl_3O_2Te \bullet NH_4$
FW: 312.0
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

AS-101 is supplied as a crystalline solid. A stock solution may be made by dissolving the AS-101 in the solvent of choice, which should be purged with an inert gas. AS-101 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of AS-101 in these solvents is approximately 30 mg/ml. AS-101 is slightly soluble in ethanol.

AS-101 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AS-101 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AS-101 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

AS-101 is an immunomodulator.[1] It inhibits IL-10 secretion from and cell proliferation of IL-10-secreting human stomach adenocarcinoma and glioblastoma multiforme (GBM) cells when used at concentrations ranging from 0.5 to 2.5 µg/ml, an effect that can be blocked by the addition of recombinant IL-10. It reverses IL-10-induced increases in phosphorylated Stat3 and reduces the expression of Bcl-2 in B16 murine melanoma cells. AS-101 sensitizes GBM cells to paclitaxel (Item No. 10461), doxorubicin (Item No. 15007), and 5-fluorouracil (5-FU; Item No. 14416) *in vitro* and to paclitaxel in a GBM mouse xenograft model when administered at a dose of 0.5 mg/kg per day. AS-101 (1 mg/kg) also prevents infiltration of $CD49d^+$ cells and decreases the expression of IL-6, TNF-α, IL-1β, and MCP-1 in the spinal cord, as well as delays onset and slows the progression of symptoms in a mouse model of experimental autoimmune encephalomyelitis (EAE).[2]

References

1. Sredni, B., Weil, M., Khomenok, G., *et al.* Ammonium trichloro(dioxoethylene-o,o')tellurate (AS101) sensitizes tumors to chemotherapy by inhibiting the tumor interleukin 10 autocrine loop. *Cancer Res.* **64(5)**, 1843-1852 (2004).
2. Lee, J.H., Halperin-Sheinfeld, M., Baatar, D., *et al.* Tellurium compound AS101 ameliorates experimental autoimmune encephalomyelitis by VLA-4 inhibition and suppression of monocyte and T cell infiltration into the CNS. *Neuromolecular Med.* **16(2)**, 292-307 (2014).

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