Melphalan

Catalog No.C13302 Batch:C1330203

Product Datasheet

Technical Data

Formula	$C_{13}H_{18}Cl_2N_2O_2$		
Molecular Weight	305.20	**CAS No.**	148-82-3
Solubility (25°C)*	In vitro		

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Biological Activity

Description	Melphalan (Alkeran, Sarcolysin, L-PAM) is a phenylalanine derivative of nitrogen mustard with antineoplastic activity.**This product is a hazardous chemical (acute toxicity/flammable/skin corrosive). Please use it while wearing a protective face mask, gloves, and clothing.**
In vitro	Exposure of a myeloma cell line (RPMI 8226) to a 30-minute pulse of melphalan (1-phenylalanine-mustard) results in a cell cycle progression delay characteristic for DNA cross-linking agents[1]. This compound has been shown to bind to DNA, RNA, and protein in cells in vitro. It induces chromosomal aberrations, sister chromatid exchange, micronuclei, mutations at the HPRT gene, and DNA damage in human cells in vitro. It also induces transformation of C3H 10T1/2 and other cells. In cultured rodent cells, it induces chromosomal aberrations, sister chromatid exchange, gene mutations, and DNA damage. In addition, it induces aneuploidy and sex-linked recessive lethal mutations in Drosophila, and mutation in bacteria[3].
In vivo	Melphalan has been tested in mice by oral, intraperitoneal, and dermal application; in rats by intraperitoneal injection, and in monkeys by oral administration. In mice, the administration of this compound produced forestomach papillomas, lymphosarcomas, and skin and lung tumours. In rats, it caused mammary gland tumours, and peritoneal sarcomas. Results in monkeys were inconclusive[3].

Protocol (from reference)

Animal Study:[2]

- **Animal Models**
  Tg.AC mice
- **Dosages**
  0.25, 1, and 4 mg/kg weekly
- **Administration**
  Topical administration/oral gavage

References

https://pubmed.ncbi.nlm.nih.gov/1915798/ https://pubmed.ncbi.nlm.nih.gov/11695563/ https://www.ncbi.nlm.nih.gov/books/NBK304320/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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