

产品名称：氯氨布西

产品别名：苯丁酸氮芥；Chlorambucil

|   |  |   |   |                            |                             |            |
|---|--|---|---|----------------------------|-----------------------------|------------|
| 生物活性：   |  |   |   |                            |                             |            |
| Description   |  | Chlorambucil is an alkylating agent with antitumor activity.  |   |                            |                             |            |
| IC <sub>50</sub> & Target   |  | DNA Alkylator[1]  |   |                            |                             |            |
| In Vitro  |  | Chlorambucil can deprive the function of complementary strands of DNA molecules via alkalization-induced cross interaction, and then inhibits tumor cell proliferation. Chlorambucil (0, 2.5, 5, 10 μM) exhibits slight inhibitory effect on Raji cell apoptosis, but potently increases DR4 and DR5 mRNA expression in Raji cells. Chlorambucil (10 μM) in combination with Tumor necrosis factor (TNF) related apoptosis inducing ligand (TRAIL, 80 ng/ml) has synergistic effect on Raji cell apoptosis and inhibition on proliferation[1].  |   |                            |                             |            |
| In Vivo   |  | Chlorambucil (0.2 mg/kg, p.o.) in combination with levamisole (5 mg/kg) has enhanced anti-cancer effect on Ehrlich ascites carcinoma which elevates apoptosis of Ehrlich ascites carcinoma and the survival rate of the mice. However, Chlorambucil exhibits adverse effects on the liver and kidneys of mice[2].   |   |                            |                             |            |
| Solvent&Solubility  |  | <b><i>In Vitro:</i></b><br><b>DMSO : ≥ 24 mg/mL (78.89 mM)</b><br><br>* "≥" means soluble, but saturation unknown.  |   |                            |                             |            |
|   |  | <div>Preparing Stock Solutions</div>  | <div><div>Solvent / Mass / Concentration</div><div>1 mg</div></div> | <div><div>5 mg</div></div> | <div><div>10 mg</div></div> |            |
|   |  |   | 1 mM  | 3.2872 mL                  | 16.4360 mL                  | 32.8720 mL |
|   |  |   | 5 mM  | 0.6574 mL                  | 3.2872 mL                   | 6.5744 mL  |
|   |  |   | 10 mM   | 0.3287 mL                  | 1.6436 mL                   | 3.2872 mL  |
| <p>*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。</p> <p>储备液的保存方式和期限：-80℃, 6 months; -20℃, 1 month。-80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。</p> |  |   |   |                            |                             |            |
| References  |  | <p>[1]. <a href="#">Guo JX, et al. Synergistic effects of chlorambucil and TRAIL on apoptosis and proliferation of Raji cells. Eur Rev Med Pharmacol Sci. 2017 Oct;21(20):4703-4710.</a></p> <p>[2]. <a href="#">Salem FS, et al. Biochemical and pathological studies on the effects of levamisole and chlorambucil on Ehrlich ascites carcinoma-bearing mice. Vet Ital. 2011 Jan-Mar;47(1):89-95.</a></p>   |   |                            |                             |            |
| 实验参考：   |  |   |   |                            |                             |            |
| Cell Assay  |  | Cultured cells at log-growth phase are digested by trypsin into single cell suspension and are seeded into 96-well plate at 1000 per well density. The plate is placed in a 37°C chamber with 5% CO2. After attached growth for 24 h, cells are treated with TRAIL at 0, 20, 40 and 80 ng/mL or Chlorambucil at 0, 2.5, 5 and 10 μM for 48 h. 10 μL CCK-8 reagent is added to each well, followed by incubation at 37°C for 4 h. Absorbance values at 450 nm are then measured by a micro-plate reader. Six parallel samples are performed in each treatment group. Cell proliferation rate (%) = mean value of experimental group/mean value of control group × 100%[1]. |   |                            |                             |            |
|   |  | Mice[2]<br><br>Female Swiss mice are divided randomly into five group (20 mice per group). Group 1 is kept as the control group, Group 2 receives intraperitoneal injection of by 2.5 × 10 <sup>6</sup> Ehrlich ascites carcinoma   |   |                            |                             |            |

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|------------------------------|---|
| <b>Animal Administration</b> | cell, Group 3 is treated orally with Chlorambucil 0.2 mg/kg body weight, Group 4 is treated orally with levamisole (5 mg/kg body weight) and Group 5 is treated orally with a combination of Chlorambucil and levamisole each day, using a bent stainless steel stomach tube[2].  |
| <b>References</b>            | <p>[1]. Guo JX, et al. Synergistic effects of chlorambucil and TRAIL on apoptosis and proliferation of Raji cells. <u>Eur Rev Med Pharmacol Sci. 2017 Oct;21(20):4703-4710.</u></p> <p>[2]. Salem FS, et al. Biochemical and pathological studies on the effects of levamisole and chlorambucil on Ehrlich ascites carcinoma-bearing mice. <u>Vet Ital. 2011 Jan-Mar;47(1):89-95.</u></p> |



源叶生物