产品名称：**Procarbazine HCl**
产品别名：盐酸甲基苄肼；**Procarbazine Hydrochloride**

生物活性：

Description	Procarbazine Hydrochloride is an alkylating agent, with anticancer activity.
In Vitro	Procarbazine Hydrochloride is an anticancer agent. Procarbazine is not cytotoxic to the LI 210 cells which lack cytochrome P-450 or monoamine oxidase activity[1].
In Vivo	Procarbazine Hydrochloride (50 mg/kg, i.p.) causes micronuclei in hematopoietic cells, but does not increase the lacZ mutant frequency (MF) in bone marrow of mice, similar to that in liver, testis, spleen, kidney, and lung. Procarbazine Hydrochloride (50 mg/kg, i.p.) has positive effect on lung, bone marrow, and spleen for carcinogenesis[2]. Procarbazine (450 mg/kg) significantly decreases testicular and epididymal weight and drastically reduces haploid cells and spermatogenic arrest in hamster[3].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 42 mg/mL (162.94 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8796 mL	19.3979 mL	38.7958 mL
	5 mM	0.7759 mL	3.8796 mL	7.7592 mL
	10 mM	0.3880 mL	1.9398 mL	3.8796 mL

*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。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

References	[1]. Erikson JM, et al. Cytotoxicity and DNA damage caused by the azoxy metabolites of procarbazine in L1210 tumor cells. Cancer Res. 1989 Jan 1;49(1):127-33. [2]. Suzuki T, et al. Procarbazine genotoxicity in the MutaMouse; strong clastogenicity and organ-specific induction of lacZ mutations. Mutat Res. 1999 Aug 18;444(2):269-81. [3]. Weissenberg R, et al. Procarbazine effects on spermatogenesis in golden hamster: a flow cytometric evaluation. Arch Androl. 2002 Mar-Apr;48(2):91-100.

实验参考：

Cell Assay	Following Procarbazine or metabolite treatment, cells are diluted to 50.000/mL in 25-cm^2 culture flasks (10 mL). Every 24 h, a 0.5-mL aliquot is removed, diluted 20-fold in Hematall isotonic diluent, and the cell number determined with a Coulter Model F electronic cell counter. Counts greater than 10,000/0.5 mL are corrected for coincidence. Cells are diluted in fresh culture media when cell density exceeded 1 × 10^6/mL. Cultures are maintained until the aggregate cell number approached 100 × 10^6/mL and doubling time has returned to 12 h. Cell survival is determined using Equation A, where T_D(doubling time for cells of interest) is 12 h [1].
Animal Administration	Mice[2] Male Muta™ Mouse animals (7-8 weeks old) are used after 2 weeks of acclimation. In the first experiment, 18 mice are injected intraperitoneally (i.p.) with 50 mg/kg Procarbazine hydrochloride in 10 mL saline/kg and eight mice are injected with 10 mL saline/kg as the vehicle control. Six treated

	mice are killed 7, 14, and 28 days after treatment, and four control mice are killed 7 and 28 days after the treatment. Killing is by cervical dislocation[2].
References	[1]. Erikson JM, et al. Cytotoxicity and DNA damage caused by the azoxy metabolites of procarbazine in L1210 tumor cells. Cancer Res. 1989 Jan 1;49(1):127-33. [2]. Suzuki T, et al. Procarbazine genotoxicity in the MutaMouse; strong clastogenicity and organ-specific induction of lacZ mutations. Mutat Res. 1999 Aug 18;444(2):269-81. [3]. Weissenberg R, et al. Procarbazine effects on spermatogenesis in golden hamster: a flow cytometric evaluation. Arch Androl. 2002 Mar-Apr;48(2):91-100.