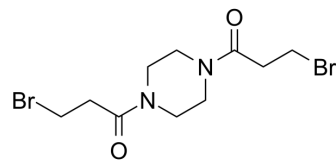


## Pipobroman

<b>Cat. No.:</b>	HY-16398		
<b>CAS No.:</b>	54-91-1		
<b>Molecular Formula:</b>	C <sub>10</sub> H <sub>16</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	356.05		
<b>Target:</b>	DNA Alkylator/Crosslinker		
<b>Pathway:</b>	Cell Cycle/DNA Damage		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 36 mg/mL (101.11 mM)  
 \* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.8086 mL	14.0430 mL	28.0859 mL
	5 mM	0.5617 mL	2.8086 mL	5.6172 mL
	10 mM	0.2809 mL	1.4043 mL	2.8086 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.08 mg/mL (5.84 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.08 mg/mL (5.84 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.08 mg/mL (5.84 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Pipobroman is a bromide derivative of piperazine and acts as an alkylating agent. Pipobroman plays its role by inhibiting DNA and RNA polymerase or by reducing pyrimidine nucleotide incorporation into DNA. Pipobroman can be used for the cancer research, including polycythemia vera, myeloproliferative neoplasm, and AML et.al<sup>[1]</sup>.

### REFERENCES

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[1]. Jean-Jacques Kiladjian, et al. Treatment of polycythemia vera with hydroxyurea and pipobroman: final results of a randomized trial initiated in 1980. J Clin Oncol. 2011 Oct 10;29(29):3907-13.

[2]. Charles Cassius, et al. Association of Vemurafenib and Pipobroman Enhances BRAF-CRAF Dimerization in Squamous Cell Carcinoma. J Invest Dermatol. 2016 Jun;136(6):1302-1305.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA