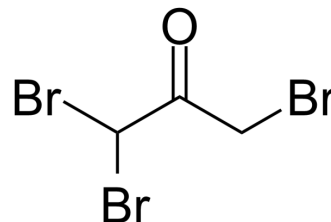


## 1,1,3-Tribromoacetone

Cat. No.:	HY-133624	
CAS No.:	3475-39-6	
Molecular Formula:	C <sub>3</sub> H <sub>3</sub> Br <sub>3</sub> O	
Molecular Weight:	294.77	
Target:	Drug Metabolite	
Pathway:	Metabolic Enzyme/Protease	
Storage:	Pure form	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (339.25 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.3925 mL	16.9624 mL	33.9248 mL
	5 mM	0.6785 mL	3.3925 mL	6.7850 mL
	10 mM	0.3392 mL	1.6962 mL	3.3925 mL

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

### BIOLOGICAL ACTIVITY

#### Description

1,1,3-Tribromoacetone is an impurity of Methotrexate (HY-14519)<sup>[1]</sup>. Methotrexate, an antimetabolite and antifolate agent, inhibits the enzyme dihydrofolate reductase, thereby preventing the conversion of folic acid into tetrahydrofolate, and inhibiting DNA synthesis<sup>[1]</sup>.

#### In Vivo

Methotrexate (Amethopterin) reduces thymus and spleen indices of mice. Methotrexate markedly decreases white blood cells, thymic and splenic lymphocytes at dose  $\geq 5$  mg/kg. However, there is a significant difference between the treatment plus control group and the model group ( $p < 0.01$ ). The combination of grape seed proanthocyanidins and Siberian ginseng eleutherosides obviously diminishes the effects of Methotrexate exposure on indices of thymus and spleens in mice<sup>[2]</sup>. Methotrexate (MTX) (2 mg/kg; i.p.; once in a week for 5 weeks) is effective in Freund's complete adjuvant-induced arthritis. The combination of Methotrexate (1 mg/kg; i.p.; once in a week for 5 weeks) and Curcumin (30 mg/kg and 100 mg/kg, thrice a week for 5 weeks; i.p.) shows a significant anti-arthritic action and protection from hematological toxicity<sup>[3]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

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[1]. Balwant Singh, et al. Process for the preparation of high purity methotrexate and derivatives thereof. Patent US4374987A 87A

[2]. [2].Swierkot J, et al. Methotrexate in rheumatoid arthritis. Pharmacol Rep. 2006 Jul-Aug;58(4):473-92

[3]. Banji D, et al. Evaluation of the concomitant use of methotrexate and curcumin on Freund's complete adjuvant-induced arthritis and hematological indices in rats. Indian J Pharmacol. 2011;43(5):546-550.

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

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