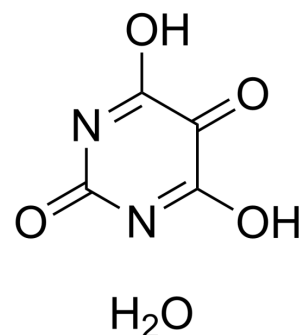


## Alloxan hydrate

Cat. No.:	HY-W017227
CAS No.:	2244-11-3
Molecular Formula:	C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>5</sub>
Molecular Weight:	160.08
Target:	Proteasome
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (624.69 mM; Need ultrasonic)  
 H<sub>2</sub>O : ≥ 100 mg/mL (624.69 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	6.2469 mL	31.2344 mL	62.4688 mL
	5 mM	1.2494 mL	6.2469 mL	12.4938 mL
	10 mM	0.6247 mL	3.1234 mL	6.2469 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: ≥ 2.5 mg/mL (15.62 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (15.62 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (15.62 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Alloxan hydrate is a diabetogenic agent to induce diabetes. Alloxan hydrate is a proteasome inhibitor. Alloxan causes diabetes in experimental animals through its ability to destroy the insulin-secreting B-cells of the pancreas<sup>[1][2]</sup>.

#### In Vitro

Alloxan hydrate inhibits the peptidase activities of the purified 26S and 20S proteasomes<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Alloxan hydrate can be used in animal modeling to build rabbit and rat diabetes models.

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## REFERENCES

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- [1]. Zhou W, et al. Diabetogenic agent alloxan is a proteasome inhibitor. *Biochem Biophys Res Commun*. 2017;488(2):400-406.
- [2]. Munday R, et al. The relationship between the physicochemical properties and the biological effects of alloxan and several N-alkyl substituted alloxan derivatives. *J Endocrinol*. 1993;139(1):153-163.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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