

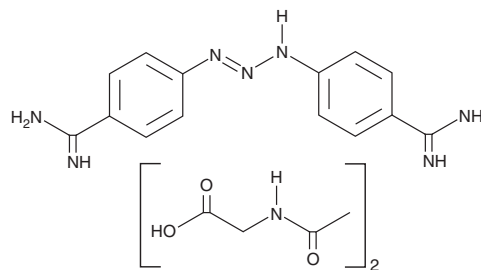
# PRODUCT INFORMATION



## Diminazene (aceturate)

Item No. 18678

**CAS Registry No.:** 908-54-3  
**Formal Name:** N-acetyl-glycine, compd.  
with 4,4'-(1-triazene-1,3-diyl)  
bis[benzenecarboximidamide] (2:1)  
**MF:** C<sub>14</sub>H<sub>15</sub>N<sub>7</sub> • 2C<sub>4</sub>H<sub>7</sub>NO<sub>3</sub>  
**FW:** 515.5  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** Room temperature  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Diminazene (aceturate) is supplied as a crystalline solid. A stock solution may be made by dissolving the diminazene (aceturate) in the solvent of choice, which should be purged with an inert gas. Diminazene (aceturate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of diminazene (aceturate) in these solvents is approximately 5, 15, and 10, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of diminazene (aceturate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of diminazene (aceturate) in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Diminazene is a diamidine that is cytotoxic to protozoa, including *Trypanosoma*, *Babesia*, and *Cytosuxoon*.<sup>1,2</sup> Diamidines, including diminazene, affect a variety of enzymes and modulate interactions between nucleic acids and proteins.<sup>3</sup> Diminazene inhibits diamine oxidase with a K<sub>i</sub> value of 13 nM.<sup>3</sup> In *Trypanosoma*, transport proteins are important in the effectiveness of diminazene.<sup>4</sup> In rats and *in vitro*, diminazene enhances the enzymatic activity of angiotensin-converting enzyme 2.<sup>5</sup>

### References

1. Mosqueda, J., Olvera-Ramkrez, A., Aguilar-Tipacamás, G., *et al.* Current advances in detection and treatment of Babesiosis. *Curr. Med. Chem.* **19(10)**, 1504-1518 (2012).
2. daSilva Oliveria, G.L. and de Freitas, R.M. Diminazene aceturate-An antiparasitic drug of antiquity: Advances in pharmacology & therapeutics. *Pharmacol. Res.* **102**, 135-157 (2015).
3. Huang, T.L., Mayence, A., and Vanden Eynde, J.J. Some non-conventional biomolecular targets for diamidines. A short survey. *Bioorg. Med. Chem.* **22(7)**, 1983-1992 (2014).
4. Munday, J.C., Settimo, L., and de Koning, H.P. Transport proteins determine drug sensitivity and resistance in a protozoan parasite, *Trypanosoma brucei*. *Front. Pharmacol.* **6**, 32 (2015).
5. Sheony, V., Gjymishka, A., Jarajapu, Y.P., *et al.* Diminazene attenuates pulmonary hypertension and improves angiogenic progenitor cell functions in experimental models. *Am. J. Respir. Crit. Care Med.* **187(6)**, 648-657 (2013).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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