

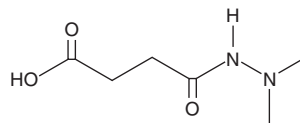
# PRODUCT INFORMATION



## Daminozide

Item No. 12033

**CAS Registry No.:** 1596-84-5  
**Formal Name:** 1-(2,2-dimethylhydrazide)-butanedioic acid  
**Synonyms:** Alar, Aminozone, B 995, DIMG, DMSA, Kylar, SADH, Succinic Acid  
**MF:** C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 160.2  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Daminozide is supplied as a crystalline solid. A stock solution may be made by dissolving the daminozide in the solvent of choice. Daminozide is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of daminozide in these solvents is approximately 5 and 11 mg/ml, 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 daminozide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of daminozide in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Daminozide is an inhibitor of the 2-oxoglutarate histone lysine demethylases KDM2A, PHF8, and KDM7A (IC<sub>50</sub>s = 1.5, 0.55, and 2.1 μM, respectively) and a plant growth regulator.<sup>1</sup> It is selective for KDM2A, PHF8, and KDM7A over KDM3-6 (IC<sub>50</sub>s = >100 μM for all), as well as the additional 2-oxoglutarate oxygenases FIH, EGLN1, and BBOX1 (IC<sub>50</sub>s = >100 μM for all). It reduces peduncle and internodal elongation in *C. officinalis* when applied at the visible bud stage at concentrations of 1,500, 3,500, or 5,000 ppm.<sup>2</sup> Formulations containing daminozide have previously been used in agricultural applications to control plant growth and fruit size.

### References

1. Rose, N.R., Woon, E.C.Y., Tumber, A., *et al.* Plant growth regulator daminozide is a selective inhibitor of human KDM2/7 histone demethylases. *J. Med. Chem.* **55**(14), 6639-6643 (2012).
2. Armitage, A.M., Bergmann, B., and Bell, E.L. Effect of daminozide and light intensity on growth and flowering of calendula as a potted plant. *HortScience* **22**(4), 611-612 (1987).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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