

PRODUCT INFORMATION



Daminozide-d₄

Item No. 39264

Formal Name: 4-(2,2-dimethylhydrazineyl)-4-oxobutanoic-2,2,3,3-d₄ acid

Synonym: Aminozone-d₄

MF: C₆H₈D₄N₂O₃

FW: 164.2

Chemical Purity: ≥98% (Daminozide)

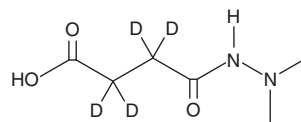
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀

Supplied as: A 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-d₄ is intended for use as an internal standard for the quantification of daminozide (Item No. 12033) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Daminozide-d₄ is supplied as a solid. A stock solution may be made by dissolving the daminozide-d₄ in the solvent of choice, which should be purged with an inert gas. Daminozide-d₄ is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of daminozide-d₄ in these solvents is approximately 11 and 5 mg/ml, respectively.

Description

Daminozide is an inhibitor of the 2-oxoglutarate histone lysine demethylases KDM2A, PHF8, and KDM7A (IC₅₀s = 1.5, 0.55, and 2.1 μM, respectively) and a plant growth regulator.¹ It is selective for KDM2A, PHF8, and KDM7A over KDM3-6 (IC₅₀s = >100 μM for all), as well as the additional 2-oxoglutarate oxygenases FIH, EGLN1, and BBOX1 (IC₅₀s = >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.² 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.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM