

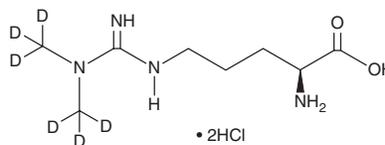
# PRODUCT INFORMATION



## $N^G, N^G$ -dimethyl-L-Arginine- $d_6$ (hydrochloride)

Item No. 33266

**CAS Registry No.:** 1313730-20-9  
**Formal Name:**  $N^5$ -[(dimethylamino)iminomethyl]-L-ornithine- $d_6$ , dihydrochloride  
**Synonyms:** ADMA- $d_6$ , Asymmetric dimethylarginine- $d_6$   
**MF:**  $C_8H_{12}D_6N_4O_2 \cdot 2HCl$   
**FW:** 281.2  
**Chemical Purity:**  $\geq 95\%$  ( $N^G, N^G$ -dimethyl-L-arginine)  
**Deuterium Incorporation:**  $\geq 99\%$  deuterated forms ( $d_1$ - $d_6$ );  $\leq 1\%$   $d_0$   
**Supplied as:** A solid  
**Storage:**  $-20^\circ C$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

$N^G, N^G$ -dimethyl-L-arginine- $d_6$  (ADMA- $d_6$ ) (hydrochloride) is intended for use as an internal standard for the quantification of  $N^G, N^G$ -dimethyl-L-arginine (Item No. 80230) 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).

ADMA- $d_6$  (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the ADMA- $d_6$  (hydrochloride) in the solvent of choice, which should be purged with an inert gas. ADMA- $d_6$  (hydrochloride) is sparingly soluble (1-10 mg/ml) in DMSO.

### Description

ADMA is an endogenous inhibitor of nitric oxide synthase (NOS).<sup>1,2</sup> It is formed from arginine by protein arginine methyltransferases (PRMTs) and degraded by dimethylarginine dimethylaminohydrolases (DDAHs) and alanine-glyoxylate aminotransferase 2 (AGXT2).<sup>1</sup> ADMA levels are increased concomitant with an increase in blood pressure in Dahl salt-sensitive rats fed a high-salt diet.<sup>2</sup> ADMA levels are increased in the plasma in a variety of endothelial dysfunction-related diseases, including hypertension, congestive heart failure, and end-stage renal disease.<sup>1,3,4</sup>

### References

1. Sydow, K. and Münzel, T. ADMA and oxidative stress. *Atheroscler. Suppl.* **4(4)**, 41-51 (2003).
2. Jin, J.S. and D'Alcey, L.G. Central and peripheral effects of asymmetric dimethylarginine, an endogenous nitric oxide synthetase inhibitor. *J. Cardiovasc. Pharmacol.* **28(3)**, 439-446 (1996).
3. Vallance, P., Leone, A., Calver, A., et al. Accumulation of an endogenous inhibitor of nitric oxide synthesis in chronic renal failure. *Lancet* **339(8793)**, 572-575 (1992).
4. Matsuoka, H., Itoh, S., Kimoto, M., et al. Asymmetrical dimethylarginine, an endogenous nitric oxide synthase inhibitor, in experimental hypertension. *Hypertension* **29(1 Pt 2)**, 242-247 (1997).

#### 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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