bio-techne
TOCRIS

Print Date: Apr 18th 2024

Certificate of Analysis

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Product Name: **1400W dihydrochloride** **Catalog No.: 1415** **Batch No.: 11**

CAS Number: 214358-33-5

IUPAC Name: *N*-[[3-(Aminomethyl)phenyl]methyl]-ethanimidamide dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{10}H_{15}N_3.2HCl.$

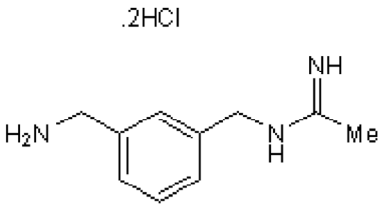
Batch Molecular Weight: 250.17

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	48.01	6.85	16.8	28.34
Found	47.65	6.82	16.39	28.39

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IUPAC Name: *N*-[[3-(Aminomethyl)phenyl]methyl]-ethanimidamide dihydrochloride

Description:

1400W dihydrochloride is a slow, tight binding, potent and highly selective inhibitor of inducible nitric oxide synthase (K_d = 7 nM). Selective over nNOS and eNOS (K_i values are 2 and 50 µM respectively). Cell-permeable and active in vivo. Neuroprotective in epilepsy models and has analgesic effects in models of mechanical and heat hypersensitivity.

Physical and Chemical Properties:

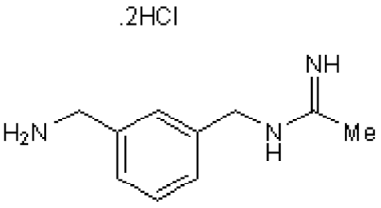
Batch Molecular Formula: $C_{10}H_{15}N_3.2HCl$.

Batch Molecular Weight: 250.17

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Putra *et al* (2020) Inducible nitric oxide synthase inhibitor, 1400W, mitigates DFP-induced long-term neurotoxicity in the rat model. Neurobiol.Dis. ***133*** 104443. PMID: 30940499.

Staunton *et al* (2018) Inducible nitric oxide synthase inhibition by 1400W limits pain hypersensitivity in a neuropathic pain rat model. Exp.Physiol ***103*** 535. PMID: 29441689.

Parmentier *et al* (1999) Selective inhibition of inducible nitric oxide synthase prevents ischaemic brain injury. Br.J.Pharmacol. ***127*** 546. PMID: 10385257.

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