

Product Name: Diminazene aceturate

Catalog No.: 6705

Batch No.: 1

CAS Number: 908-54-3

IUPAC Name: 4,4'-(1-Triazene-1,3-diyl)bis[benzenecarboximidamide] bis(*N*-acetylglycinate)

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₅N₇.2C₄H₇NO₃.H₂O

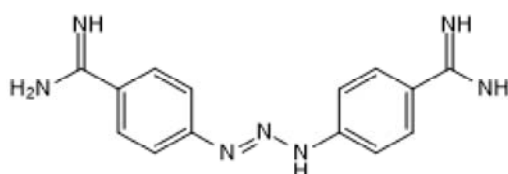
Batch Molecular Weight: 533.54

Physical Appearance: Yellow solid

Solubility: water to 100 mM

Storage: Store at RT

Batch Molecular Structure:



.2C₄H₇NO₃

2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	49.53	5.86	23.63
Found	49.51	5.89	23.62

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Description:

ASIC blocker (IC₅₀ values are 202, ~320, ~320 and 864 nM for ASIC1b, ASIC1a, ASIC3 and ASIC2a, respectively). Exhibits no activity in ENaC channels expressed in oocytes. Accelerates desensitization of ASIC currents in hippocampal neurons. Inhibits mesotrypsin (K_i = 3.6±0.3 μM). Displays in vitro and in vivo anti-inflammatory effects in mice. Antihyperalgesic.

Physical and Chemical Properties:

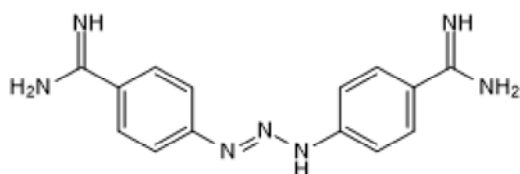
Batch Molecular Formula: C₁₄H₁₅N₇.2C₄H₇NO₃.H₂O

Batch Molecular Weight: 533.54

Physical Appearance: Yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



.2C₄H₇NO₃

Storage: Store 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. Our standard recommendations are:

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:

Krauson et al (2018) Molecular basis of inhibition of acid sensing ion channel 1A by diminazene. PLoS One **13** e0196894. PMID: 29782492.

Lee et al (2018) Inhibition of acid-sensing ion channels by diminazene and APETx2 evoke partial and highly variable antihyperalgesia in a rat model of inflammatory pain. Br.J.Pharmacol. **175** 2204. PMID: 29134638.

Goru et al (2017) Diminazene aceturate prevents nephropathy by increasing glomerular ACE2 and AT2 receptor expression in a rat model of type1 diabetes. Br.J.Pharmacol. **174** 3118. PMID: 28688122.

Kayode et al (2017) Small molecule inhibitors of mesotrypsin from a structure-based docking screen. PLoS One **12** e0176694. PMID: 28463992.

Chen et al (2010) Diarylamidines: high potency inhibitors of acid-sensing ion channels. Neuropharmacology **58** 1045. PMID: 20114056.

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