

**Product Name:** QX 314 bromide

**Catalog No.:** 1014

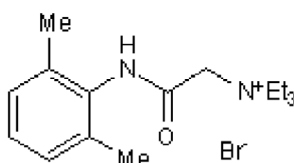
**Batch No.:** 8

CAS Number: 24003-58-5

IUPAC Name: *N*-(2,6-Dimethylphenylcarbamoylmethyl)triethylammonium bromide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>16</sub>H<sub>27</sub>N<sub>2</sub>OBr.  
**Batch Molecular Weight:** 343.31  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 55.98  | 7.93     | 8.16     |
| Found       | 56.07  | 7.91     | 8.03     |

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**Description:**

QX 314 bromide is a membrane impermeable quaternary derivative of lidocaine, a blocker of voltage-activated Na<sup>+</sup> channels. Intracellular QX 314 bromide also inhibits calcium currents in hippocampal CA1 pyramidal neurons.

**Physical and Chemical Properties:**

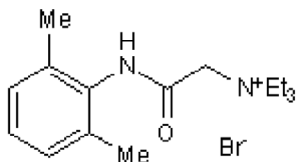
Batch Molecular Formula: C<sub>16</sub>H<sub>27</sub>N<sub>2</sub>OBr.

Batch Molecular Weight: 343.31

Physical Appearance: White solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**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. \*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:**

**Talbot and Sayer** (1996) Intracellular QX-314 inhibits calcium currents in hippocampal CA1 pyramidal neurons. *J.Neurophysiol.* **76** 2120. PMID: 8890325.

**Perkins and Wong** (1995) Intracellular QX-314 blocks the hyperpolarization activated inward current I<sub>q</sub> in hippocampal CA1 pyramidal cells. *J.Neurophysiol.* **73** 911. PMID: 7760149.

**Alreja and Aghajanian** (1994) QX-314 blocks the potassium but not the sodium dependent components of the opiate response in locus coeruleus neurons. *Brain.Res.* **639** 320. PMID: 8205485.

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