bio-techne
TOCRIS

Print Date: Jun 21st 2023

Certificate of Analysis

www.tocris.com

Product Name: **QX 314 bromide** **Catalog No.: 1014** **Batch No.: 2**

CAS Number: 24003-58-5

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{16}H_{27}N_2OBr$

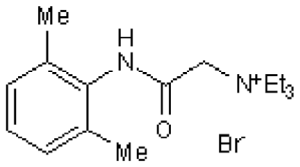
Batch Molecular Weight: 343.31

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 222 - 223°C

^{1}H NMR: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	
Theoretical	55.98	7.87	8.16	0 0 0
Found	55.89	7.97	8.08	0 0 0

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **QX 314 bromide** **Catalog No.: 1014** **2**

CAS Number: 24003-58-5

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

Description:

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

Physical and Chemical Properties:

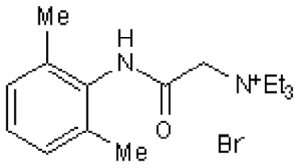
Batch Molecular Formula: $C_{16}H_{27}N_2OBr$

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 Iq 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.