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TOCRIS

Print Date: Apr 24th 2026

Certificate of Analysis

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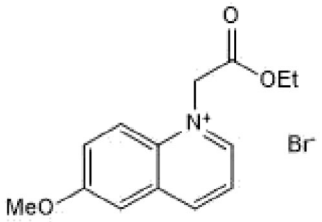
Product Name: **MQAE** **Catalog No.: 7856** **Batch No.: 3**

CAS Number: 162558-52-3

IUPAC Name: 1-(2-Ethoxy-2-oxoethyl)-6-methoxyquinolin-1-ium bromide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	$C_{14}H_{16}BrNO_3$
Batch Molecular Weight:	326.19
Physical Appearance:	Pale yellow solid
Solubility:	DMSO to 10 mM water to 10 mM
Storage:	Store at -20°C
Batch Molecular Structure:	

2. ANALYTICAL DATA

HPLC:	Shows 99.0% purity at 350 nm
^{1}H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
UV Spectrum:	Consistent with structure
λ_{max}:	353 nm (MeOH)
λ_{ex}:	347 nm (MeOH)
λ_{em}:	463 nm (MeOH)

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

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Description:

MQAE is a membrane-permeable intracellular chloride ion (Cl^-) indicator. The fluorescence intensity of MQAE decreases proportionally as Cl^- ions increase. Excitation/emission maxima (λ) are 355 nm and 460 nm respectively. Can be used in fluorescence microscopy and flow cytometry, suitable for use in vivo and in vitro.

Physical and Chemical Properties:

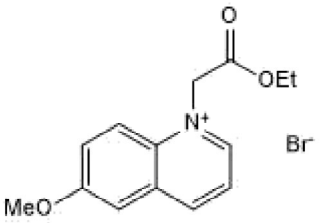
Batch Molecular Formula: $C_{14}H_{16}BrNO_3$

Batch Molecular Weight: 326.19

Physical Appearance: Pale yellow solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM
water to 10 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:

Wan *et al* (2019) An ATP-regulated ion transport nanosystem for homeostatic perturbation therapy and sensitizing photodynamic therapy by autophagy inhibition of tumors. ACS Cent.Sci. ***5*** 327. PMID: 30834321.

Verkman *et al* (1989) Synthesis and characterization of improved chloride-sensitive fluorescent indicators for biological applications. Anal.Biochem. ***178*** 355. PMID: 2751097.

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techsupport@bio-techne.com

North America
Tel: (800) 343 7475

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info.cn@bio-techne.com
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