bio-techne
TOCRIS

Print Date: Mar 31st 2025

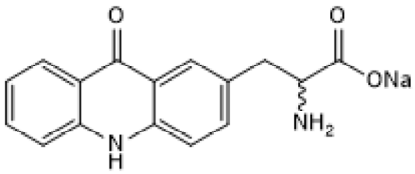
Certificate of Analysis

www.tocris.com

Product Name: **Acridonylalanine** **Catalog No.: 8086** **Batch No.: 1**

IUPAC Name: Sodium 2-Amino-3-(9-oxo-9,10-dihydroacridin-2-yl)propanoate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Weight:	304.28
Physical Appearance:	Yellow solid
Solubility:	DMSO to 10 mM water to 10 mM
Storage:	Store at -20°C
Batch Molecular Structure:	

2. ANALYTICAL DATA

HPLC:	Shows 98.1% purity at 385 nm
^{1}H NMR:	Consistent with structure
Mass Spectrum:	Consistent with structure
UV Spectrum:	Consistent with structure
λ_{max}:	385 nm (RPM-00056)
λ_{ex}:	387 nm (RPM-00056)
λ_{em}:	422 nm (RPM-00056)

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IUPAC Name: Sodium 2-Amino-3-(9-oxo-9,10-dihydroacridin-2-yl)propanoate

Description:

Key information: Acridonylalanine is a fluorescent unnatural amino acid. Can be used to specifically label a protein of interest during protein translation. Suitable for lifetime and fluorescence resonance energy transfer (FRET) studies. Used for: labeling proteins, monitoring protein interactions and conformational changes through fluorescence polarization or lifetime experiments. Application: fluorescence lifetime imaging microscopy (FLIM), FRET interactions with common fluorophores such as methoxycoumarin. Properties and Photophysical Data: highly photostable, high quantum yield and long fluorescence lifetime in water. Excitation and em... Please see product specific page on www.tocris.com for full description.

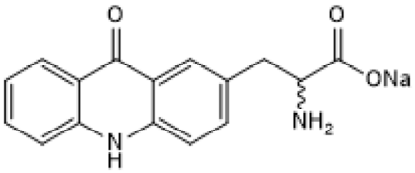
Physical and Chemical Properties:

Batch Molecular Weight: 304.28

Physical Appearance: 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:

Hostetler *et al* (2018) Systematic evaluation of soluble protein expression using a fluorescent unnatural amino acid reveals no reliable predictors of tolerability. ACS Chem.Biol. ***13*** 2855. PMID: 30216041.

Speight *et al* (2013) Efficient synthesis and *in vivo* incorporation of acridon-2-ylalanine, a fluorescent amino acid for lifetime and Förster resonance energy transfer/luminescence resonance energy transfer studies. J.Am.Chem.Soc. ***135*** 18806. PMID: 24303933.

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