Product Datasheet

Acridine orange 10-nonyl bromide

Catalog No. **BP-01612** · CAS **75168-11-5** · Form **free base** · Physical state **solid** · Color **brown to red** · Version **1.0** · Revision **2026-09-14**

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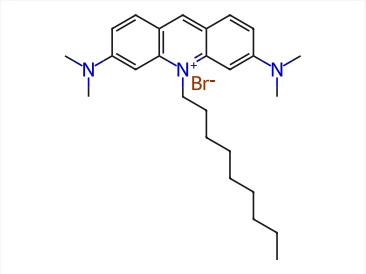
Target	Research area
Fluorescent Dye	**Others**

Molecular formula	$C_{26}H_{38}BrN_3$
Molecular weight	**472.5040**

STRUCTURE



DESCRIPTION

10-n-Nonyl acridine orange (NAO) is a mitochondrial-specific fluorochrome. Acridine Orange 10-Nonyl Bromide is a fluorescent probe for cardiolipin (λex: 489 nm, λem: 525 nm).

BIOLOGICAL ACTIVITY

In Vitro

Acridine Orange 10-Nonyl Bromide is a fluorescent probe for cardiolipin (λex: 489 nm, λem: 525 nm) which can be used to quantify the cardiolipin in isolated mitochondria. In 15 min at 20°C, Acridine Orange 10-Nonyl Bromide at 4.75 μM saturates the mitochondrial binding sites present in 1.5 X 106 cells.

When Acridine Orange 10-Nonyl Bromide interacts with cardiolipin, the dye excitation and emission wave lengths shift from 496 and 525 nm to 450 and 640 nm, respectively. Increasing amounts of cardiolipin (0 to 30 μM) and other acidic phospholipids in thin-walled vesicles added to Acridine Orange 10-Nonyl Bromide (45 μM) changes the red fluorescence emission measured at 640 nm according to the liposome composition.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Ratinaud MH, et al. In situ flow cytometric analysis of nonyl acridine orange-stained mitochondria from splenocytes. Cytometry. 1988 May;9(3):206-12.

[2]. Gallet PF, et al. Direct cardiolipin assay in yeast using the red fluorescence emission of 10-N-nonyl acridine orange. Eur J Biochem. 1995 Feb 15;228(1):113-9.