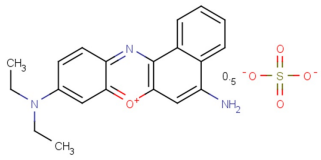
# Data Sheet (Cat.No.T19034)

TargetMol
A DRUG SCREENING EXPERT

Nile Blue A sulfate

## Chemical Properties



| | |
|---|---|
| CAS No.: | 3625-57-8 |
| Formula: | C20H20N3O3S0.5 |
| Molecular Weight: | 366.42 |
| Appearance: | N/A |
| Storage: | 0-4℃ for short term (days to weeks), or -20℃ for long term (months). |

## Biological Description

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|---|---|
| Description | Nile Blue A (Nile blue sulfate) is used as the differentiation of melanins and lipofuscins. It is also useful for staining fats and the preparation of an amperometric glucose sensor. |
| Targets($IC_{50}$) | Others: None |
| In vitro | Nile blue A is a satisfactory stain for PHB granules in bacteria and is in fact superior to Sudan black B for this purpose. Poly-p3-hydroxybutyrate granules exhibit a strong orange fluorescence when stained with Nile blue A. Nile blue A appears to stain many more PHB granules than Sudan black B does and is not as easily ished from the cell by decolorization procedures [1]. Nile blue A is used as a stain for polyhydroxyalkanoic acid-accumulating microorganisms or to detect polyhydroxyalkanoic acids in microorganisms. Escherichia coli cells that do not accumulate detectable polyhydroxyalkanoic acids can be stained with Nile blue A. Nile blue A staining does not affect either surface display of peptides or specific labeling of these peptides by a second fluorescence. Staining E. coli for flow cytometry using Nile blue A is an easy-to-handle and low-cost alternative to other fluorescent dyes or the intracellular expression of, for example, green fluorescent protein [2]. Nile blue A is used as a potent photosensitizer for photodynamic therapy. The dye when administered intravenously disperses throughout the body by circulating through blood and is taken up by most cells that emphasize its interaction with various biomolecule [3]. |

## Solubility Information

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|---|---|
| Solubility | DMSO: 150 mg/mL (409.37 mM)<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.729 mL | 13.646 mL | 27.291 mL |
| 5 mM | 0.546 mL | 2.729 mL | 5.458 mL |
| 10 mM | 0.273 mL | 1.365 mL | 2.729 mL |
| 50 mM | 0.055 mL | 0.273 mL | 0.546 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Ostle AG, et al. Nile blue A as a fluorescent stain for poly-beta-hydroxybutyrate. Appl Environ Microbiol. 1982 Jul;44(1):238-41.
2. Betscheider D, et al. Nile blue A for staining Escherichia coli in flow cytometer experiments. Anal Biochem. 2009 Jan 1;384(1):194-6.
3. Mishra SS, et al. Spectroscopic investigation of interaction of Nile Blue A, a potent photosensitizer, with bile salts in aqueous medium. J Photochem Photobiol B. 2014 Dec;141:67-75.



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