

Product Name: Bis-ANS

Catalog No.: 5908

Batch No.: 1

CAS Number: 65664-81-5

IUPAC Name: 4,4'-Bis(phenylamino)-[1,1'-binaphthalene]-5,5'-disulfonic acid dipotassium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₂H₂₂K₂N₂O₆S₂

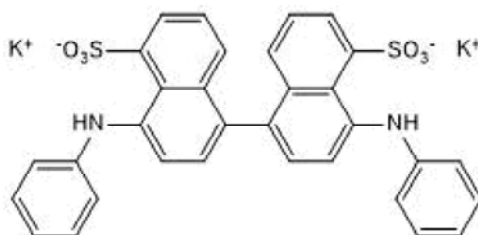
Batch Molecular Weight: 672.85

Physical Appearance: Green solid

Solubility: DMSO to 100 mM
water to 20 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

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

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Description:

Fluorescent probe for nonpolar cavities in proteins. Used to detect A β fibre (K_d = ~80 nM); exhibits distinct fluorescent profiles for fibres and oligomers. Fluoresces in hydrophobic environments, negligible fluorescence in water solutions. Excitation/emission λ ~ 355/520 nm at pH 7.4. Also modulates liquid-liquid phase separation (LLPS) of TDP-43 low complexity domain in vitro. Displays biphasic modulation; promotes LLPS at low concentrations but disrupts liquid droplets at higher concentrations.

Physical and Chemical Properties:

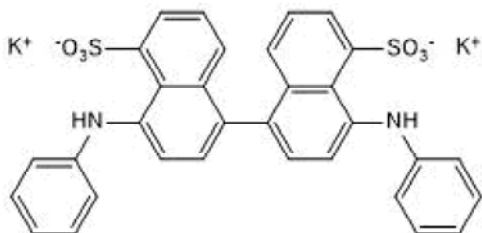
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Batch Molecular Weight: 672.85

Physical Appearance: Green solid

Minimum Purity: $\geq 97\%$

Batch Molecular Structure:



References:

Babinchak et al (2020) Small molecules as potent biphasic modulators of protein liquid-liquid phase separation Nat.Commun. **11** 5574. PMID: 33149109.

Yunan et al (2015) A comparison of three fluorophores for the detection of amyloid fibers and prefibrillar oligomeric assemblies. ThT (Thioflavin T); ANS (1-Anilino-naphthalene-8-sulfonic Acid); and bisANS (4,4'-Dianilino-1,1'-binaphthyl-5,5'-disulfonic Acid). Biochemistry **54** 4297. PMID: 26087242.

Rosen et al (1969) Dimer formation from 1-amino-8-naphthalenesulfonate catalyzed by bovine serum albumin. A new fluorescent molecule with exceptional binding properties. Biochemistry **8** 3915. PMID: 5388144.

Storage: Store at RT

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 100 mM

water to 20 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. Our standard recommendations are:

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.

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