

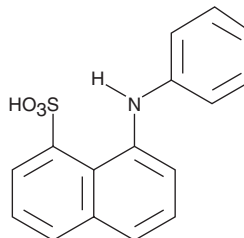
PRODUCT INFORMATION



1,8-ANS

Item No. 10010219

CAS Registry No.: 82-76-8
Formal Name: 8-(phenylamino)-1-naphthalenesulfonic acid
Synonym: 1-Anilinonaphthalene-8-Sulfonic Acid
MF: C₁₆H₁₃NO₃S
FW: 299.3
Purity: ≥95%
UV/Vis.: λ_{max}: 219, 270, 374 nm
Ex./Em. Max: 350/520 nm (free),
468-477 nm (bound)
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

1,8-ANS is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,8-ANS in the solvent of choice, which should be purged with an inert gas. 1,8-ANS is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 1,8-ANS in these solvents is approximately 20 and 30 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 1,8-ANS can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1,8-ANS in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

1,8-ANS is a fluorescent dye that binds with high affinity to hydrophobic surfaces of proteins.^{1,2} 1,8-ANS has an excitation maximum of 350 nm. It has an emission maximum of 520 nm when free in solution but undergoes a blue shift with an increase in fluorescence intensity when bound to protein; for example, when bound to intestinal fatty acid binding protein (FABP2) it has emission maxima of 468-477 nm. 1,8-ANS binds to low polarity regions of protein surfaces making it well suited for determining the affinity of hydrophobic ligands to their corresponding binding proteins, such as the binding of free fatty acids to FABPs.¹⁻³ 1,8-ANS binds to FABP2 with a K_d value of approximately 9.7 μM at 24.5°C.²

References

1. Pastukhov, A.V. and Ropson, I.J. Fluorescent dyes as probes to study lipid-binding proteins. *Proteins* **53**(3), 607-615 (2003).
2. Kirk, W.R., Kurian, E., and Prendergast, F.G. Characterization of the sources of protein-ligand affinity: 1-sulfonato-8-(1')anilinonaphthalene binding to intestinal fatty acid binding protein. *Biophys. J.* **70**(1), 69-83 (1996).
3. Ory, J.J. and Banaszak, L.J. Studies of the ligand binding reaction of adipocyte lipid binding protein using the fluorescent probe 1,8-anilinonaphthalene-8-sulfonate. *Biophys. J.* **77**(2), 1107-1116 (1999).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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