

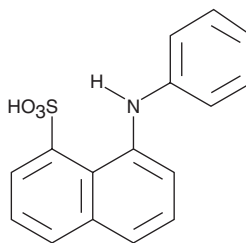
Product Information



1,8-ANS

Catalog No. 10010219

CAS Registry No.: 82-76-8
Formal Name: 8-(phenylamino)-1-naphthalenesulfonic acid
Synonym: 1-Anilino-naphthalene-8-Sulfonic Acid
MF: C₁₆H₁₃NO₃S
FW: 299.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 1,8-ANS be stored as supplied at -20°C. It will be stable for at least two years.

1,8-ANS is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,8-ANS in an organic solvent 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 mg/ml.

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 compound 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.

1,8-ANS is a fluorescent dye that binds with high affinity to hydrophobic surfaces of proteins. The emission maximum of 1,8-ANS undergoes a blue shift and fluorescence intensity increases significantly upon binding to low polarity regions of a protein surface.^{1,2} These properties make 1,8-ANS well suited for determining the affinity of hydrophobic ligands to their corresponding binding proteins, such as the binding of free fatty acids to fatty acid binding proteins (FABPs).¹⁻³ 1,8-ANS binds to intestinal FABP (FABP2) with a K_d value of ~9.7 μM at 24.5°C.³

References

1. Pastukhov, A.V. and Ropson, I.J. Fluorescent dyes as probes to study lipid-binding proteins. *Proteins: Structure, Function, and Genetics* **53**, 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')anilino-naphthalene binding to intestinal fatty acid binding protein. *Biophys. J.* **70**, 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-anilino-naphthalene-8-sulfonate. *Biophys. J.* **77**, 1107-1116 (1999).

Related Products

FABP1 (rat recombinant) - Cat. No. 10005200 • FABP3 (human recombinant) - Cat. No. 10007432 • FABP2 (rat recombinant) - Cat. No. 10007938 • FABP4 (human recombinant) - Cat. No. 10009549 • FABP7 (human recombinant) - Cat. No. 10009551 • FABP4 (murine recombinant) Western Ready Control - Cat. No. 10009676 • FABP5 (human recombinant) - Cat. No. 10010364

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com