

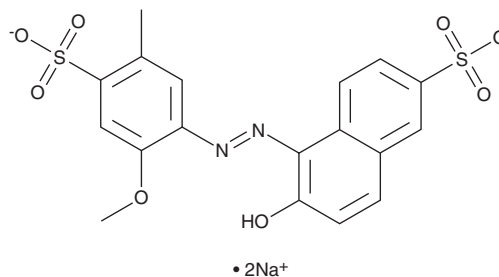
PRODUCT INFORMATION



Allura Red AC

Item No. 44514

CAS Registry No.: 25956-17-6
Formal Name: 6-hydroxy-5-[2-(2-methoxy-5-methyl-4-sulfophenyl)diazenyl]-2-naphthalenesulfonic acid, disodium salt
Synonyms: C.I. 16035, E129, FD&C Red No. 40, Food Red No. 40, Red 40
MF: $C_{18}H_{14}N_2O_8S_2 \cdot 2Na$
FW: 496.4
Absorbance: 504 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Protect from light



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

Laboratory Procedures

Allura Red AC is supplied as a solid. A stock solution may be made by dissolving the Allura Red AC in the solvent of choice, which should be purged with an inert gas. Allura Red AC is soluble (≥10 mg/ml) in DMSO.

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 Allura Red AC can be prepared by directly dissolving the solid in aqueous buffers. Allura Red AC is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Allura Red AC is an azo dye.¹ It displays an absorbance maximum at 504 nm.^{1,2} Allura Red AC (70 mg/kg) decreases novel object exploration time in the novel objection recognition test and reduces medial prefrontal cortex volume, neuron and glial cell numbers, and dendrite length in rats.³ Oral administration of Allura Red AC (14 mg/kg) induces DNA damage in colon epithelial cells in mice.⁴ It also decreases survival and increases intestinal inflammation when administered in combination with a high-fat diet in mice. Allura Red AC has been found in wastewater.² Formulations containing Allura Red AC have been used as food dyes.

References

1. Sabnis, R.W. Handbook of biological dyes and stains: Synthesis and industrial applications. John Wiley & Sons, Inc., 1st edition (2010).
2. Şen, N.E. and Şenol, Z.M. Effective removal of Allura red food dye from water using cross-linked chitosan-diatomite composite beads. *Int. J. Biol. Macromol.* **253(Pt. 1)**, 126632 (2023).
3. Noorafshan, A., Hashemi, M., Karbalay-Doust, S., *et al.* High dose Allura Red, rather than the ADI dose, induces structural and behavioral changes in the medial prefrontal cortex of rats and taurine can protect it. *Acta Histochem.* **120(6)**, 586-594 (2018).
4. Zhang, Q., Chumanevich, A.A., Nguyen, I., *et al.* The synthetic food dye, Red 40, causes DNA damage, causes colonic inflammation, and impacts the microbiome in mice. *Toxicol. Rep.* **11**, 221-232 (2023).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/15/2026

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM