

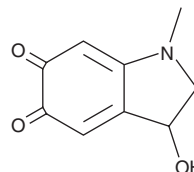
PRODUCT INFORMATION



Adrenochrome

Item No. 43520

CAS Registry No.: 54-06-8
Formal Name: 2,3-dihydro-3-hydroxy-1-methyl-1H-indole-5,6-dione
MF: $C_9H_9NO_3$
FW: 179.2
Purity: $\geq 95\%$
Supplied as: A 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

Adrenochrome is supplied as a solid. A stock solution may be made by dissolving the adrenochrome in the solvent of choice, which should be purged with an inert gas. Adrenochrome is sparingly soluble (1-10 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 adrenochrome can be prepared by directly dissolving the solid in aqueous buffers. Adrenochrome is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Adrenochrome is an oxidative metabolite of epinephrine.¹⁻³ It is formed from epinephrine by various enzymes, including tyrosinases and xanthine oxidase.² Perfusion of isolated rat hearts with 50 mg/L adrenochrome decreases contractile force, cardiac ATP levels, and the cardiac ratio of ATP/ADP, indicating inhibition of cardiac oxidative phosphorylation, as well as induces myocardial necrosis.^{2,3}

References

1. Yates, J.C., Taam, G.M., Singal, P.K., *et al.* Protection against adrenochrome-induced myocardial damage by various pharmacological interventions. *Br. J. Exp. Pathol.* **61**(3), 242-255 (1980).
2. Behonick, G.S., Novak, M.J., Nealley, E.W., *et al.* Toxicology update: The cardiotoxicity of the oxidative stress metabolites of catecholamines (aminochromes). *J. Appl. Toxicol.* **21 Suppl 1**, S15-S22 (2001).
3. Krstenansky, J.L., Xu, D., Leitzke, R., *et al.* Adrenochrome and related oxidative metabolites of catecholamines: Effects on dopamine neurons and receptor binding profiles. *Schizophr. Res.* **133**(1-3), 264-265 (2011).

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.

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