

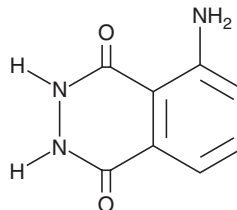
PRODUCT INFORMATION



Luminol

Item No. 16803

CAS Registry No.: 521-31-3
Formal Name: 5-amino-2,3-dihydro-1,4-phthalazinedione
Synonyms: 3-Aminophthalhydrazide, NSC 5064
MF: C₈H₇N₃O₂
FW: 177.2
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 295, 355 nm
Ex./Em. Max: 355/411 nm
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

Luminol is supplied as a crystalline solid. A stock solution may be made by dissolving the luminol in the solvent of choice, which should be purged with an inert gas. Luminol is soluble in DMSO at a concentration of approximately 2 mg/ml.

Luminol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Luminol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Luminol has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Luminol is a cyclic diacyl hydrazide that exhibits chemiluminescence upon oxidation. For example, HRP, combined with hydrogen peroxide as an activator, causes luminescent peroxidation of luminol.¹ This reaction can be enhanced by certain phenol derivatives, such as *p*-substituted phenols.² Luminol can also be oxidized, and chemiluminesce, by compounds containing iron, copper, gold, or cyanide.^{3,4} The excitation/emission maxima for luminol are 355/411 nm.

References

1. Cormier, M.J. and Prichard, P.M. An investigation of the mechanism of the luminescent peroxidation of luminol by stopped flow techniques. *J. Biol. Chem.* **243**(18), 4706-4714 (1968).
2. Thorpe, G.H.G., Kricka, L.J., Moseley, S.B., *et al.* Phenols as enhancers of the chemiluminescent horseradish peroxidase-luminol-hydrogen peroxide reaction: Application in luminescence-monitored enzyme immunoassays. *Clin. Chem.* **31**(8), 1335-1341 (1985).
3. Fan, A., Cao, Z., Li, H., *et al.* Chemiluminescence platforms in immunoassay and DNA analyses. *Anal. Sci.* **25**(5), 587-597 (2009).
4. Vladimirov, Y.A. and Proskurnina, E.V. Free radicals and cell chemiluminescence. *Biochemistry Mosc.* **74**(13), 1545- 1566 (2009).

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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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