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ProductInformation

D-Luciferin sodium salt

Product Number **L 6882**
Storage Temperature -0 °C

Product Description
Molecular Formula: $C_{11}H_7N_2NaO_3S_2$
Molecular Weight: 302.3
CAS Number: 103404-75-7
λ_{max}: 268 nm, 332 nm[1]
Extinction Coefficient: E^{mM} = 7.08, 18.2

The excitation and emission spectra for D-luciferin have been published. The excitation is pH dependent, with a maximum of 327 nm (pH 4) and 385 nm (pH 11). The emission profile is identical at both pH's, with a maximum at 537 nm.[2] The dependence of the bioluminscence of the luceriferase-luciferin system on Zn^{2+} concentration has been published.[3]

ATP can be measured with a reagent made up of luciferin and luciferase from firefly. A discussion of extraction buffers for releasing ATP from bacteria and tissues has been published.[4,5] If D-luciferin is used for assaying the concentration of ATP in cell lysates, it is important to know if ATPases are present. These enzymes must be inactivated in the extraction process so that the ATP is not destroyed. Heat or low pH are usually used and do not affect the integrity of the ATP.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
Solutions of this product should be made with nitrogen purged water.

Storage/Stability
Luciferin is easily oxidized in the presence of light. Solutions of this product should not be stored. If frozen, solutions will degrade approximately 20% with each freeze-thaw.

References
1. J. Am. Chem. Soc., **85**, 337 (1963).
2. Bowie, L. J., Synthesis of Firefly Luciferin and Structural Analogs. Methods in Enzymology, **57**, 23 (1978).
3. DeLuca, M., and McElroy, W. D., Purification and Properties of Firefly Luciferase. Methods in Enzymology, **57**, 5 (1978).
4. Chappelle, E. W., et al., Determination of Bacterial Content in Fluids. Methods in Enzymology, **57**, 65-72 (1978).
5. Karl, D. M., Determination of GTP, GDP, and GMP in Cell and Tissue Extracts. Methods in Enzymology, **57**, 88 (1978).

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