Lumiprobe Corporation
115 Airport Dr Suite 160
Westminster, Maryland 21157
美國
手機：+1 888 973 6353
傳真：+1 888 973 6354
電子郵件：order@lumiprobe.com

D-Luciferin, Potassium Salt

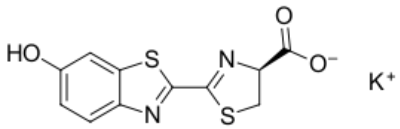
http://hk.lumiprobe.com/p/d-luciferin

D-luciferin is a low-molecular-weight substrate for the firefly (*Photinus pyralis*) luciferase enzyme. The ATP-dependent oxidation of D-luciferin by luciferase is accompanied by intense chemiluminescence at 560 nm.

Luciferase is encoded by the *luc* gene, which is widely used as a reporter gene for the genetic modification of cells and organisms. When D-luciferin is administered, it is taken up by cells, and the appearance of luminescence indicates the presence and activity of the luciferase. Because most organisms do not naturally synthesize luciferase, the background signal is virtually absent, making this reporter system extremely sensitive.

The luciferase/luciferin system is used to study gene expression, noninvasively monitor tumor growth, metastasis, or the fate of transplanted stem cells in living animals over time, visualize infections, measure ATP levels in cells, and assess cell viability.

For *in vivo* experiments, the standard working dose is 100-150 mg/kg of mouse body weight administered intraperitoneally. For *in vitro* assays, the working concentration is typically 0.1-1.0 mM. The signal intensity and kinetics depend on pH, ATP and Mg^{2+} concentrations, temperature, and the permeability of cell membranes to the substrate.



外观:

分子量: 318.42

CAS 编号: 115144-35-9 (potassium salt)

分子式: $C_{11}H_7KN_2O_3S_2$

溶解度:

质量控制:

储存条件: