

## D-Luciferin, Potassium Salt

### D1375449

**Storage:** -20°C. Store in the dark. Desiccated.

#### Introduction:

Luciferin is a common bioluminescent reporter used for in vivo imaging of the expression of luciferase. This water soluble substrate for the firefly luciferase enzyme utilizes ATP and  $Mg^{2+}$  as cofactors to emit a characteristic yellow-green emission in the presence of oxygen, which shifts to red light in vivo at 37°C. Through the utilization of ATP, the reaction can be further used to indicate the presence of energy or life in order to function as a life-death stain.

Luciferin is a common reagent used throughout the biotechnology field and specifically for in vivo imaging. Luciferase labeled tumor cells, stem cells or infectious diseases are often inoculated into research animals such as rats or mice for investigation. The injection of luciferin allows for the real-time, noninvasive monitoring of disease progression and/or drug efficacy in these model systems through Bioluminescence Imaging (BLI).

Luciferin is also commonly used for in vitro research, including luciferase and ATP assays, gene reporter assays, high throughput sequencing and various contamination assays.

#### APPLICATIONS:

- In vivo cellular imaging.
- Luciferase and ATP assays.
- Gene reporter assays.
- High throughput sequencing.
- Contamination assays.

#### Assay Buffer:

TMCA Buffer	Final Concentration
Tris-HCl, pH 7.8	100mM
MgCl <sub>2</sub>	5mM
Coenzyme A (CoA) (hydrate)	0.25mM
ATP (disodium salt hydrate)	0.15mM