## **Technical Data Sheet**

# **D-Luciferin Potassium Salt**

#### **Product Information**

Material Number: 556888
Size: 250 mg

## Description

D-Luciferin, also known as beetle luciferin or (D-(-)-2-(6'-hydroxy-2'-benzothiazolyl)-thiazoline-4-carboxylic acid), has a formula weight of 318.41 and is a synthetically made substrate which can be catalyzed by firefly luciferase (enzymatic reaction shown below). D-Luciferin is lyophilized in the form of a monopotassium salt and has been purified by HPLC to remove dehydroluciferin and L-Luciferin, both of which are competitive inhibitors of firefly luciferase. It is important to note, however, that D-Luciferin can form dehydroluciferin in the presence of ultraviolet light and/or moisture. For this reason, prior to reconstitution, store in the dark at -20°C.

$$Mg^{2+}$$
(1) LH<sub>2</sub> + ATP + E  $\longleftrightarrow$  E·LH<sub>2</sub> AMP + PP<sub>i</sub>
(2) E·LH<sub>2</sub> AMP + O<sub>2</sub>  $\longleftrightarrow$  E·P + AMP + CO<sub>2</sub>+ Light

LH<sub>2</sub> = D-luciferin E = Firefly luciferase P = Oxyluciferin

## **Preparation and Storage**

Store lyophilized D-Luciferin at -20 °C in the dark.

Reconstitute lyophilized D-Luciferin with deionized water and bring the solution to a pH of 6.0 - 6.3 with HCl/NaOH. At a pH greater than 6.3, D-Luciferin may undergo a slow racemization from the D- to the L-isomer.

After reconstitution, store at 4 °C and protected from light for up to 2 weeks or alternatively, store at -20 °C for up to 1 year [aliquoted and protected from light].

## **Application Notes**

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ſ	Luminometer	Routinely Tested	$\Box$		

## **Suggested Companion Products**

Catalog Number	Name	Size	Clone
556877	D-Luciferin Potassium Salt	10 mg	(none)
556878	D-Luciferin Potassium Salt	50 mg	(none)
556879	D-Luciferin Potassium Salt	100 mg	(none)
556866	Enhanced Luciferase Assay Kit	100 tests	(none)

#### **Product Notices**

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

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