Technical Data Sheet

D-Luciferin Sodium Salt

Product Information

Material Number: 556876 Size: 100 mg

Description

D-Luciferin (sodium salt), also known as beetle luciferin or (D-(-)-2-(6'-hydroxy-2'-benzothiazolyl)-thiazoline-4-carboxylic acid), has a formula weight of 302.30 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 monosodium 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) $LH_2 + ATP + E \longleftrightarrow E \cdot LH_2 AMP + PP_i$
(2) $E \cdot LH_2 AMP + O_2 \longleftrightarrow E \cdot P + AMP + CO_2 + Light$
 $LH_2 = D$ -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].

Suggested Companion Products

Catalog Number	Name	Size	Clone	
556875	D-Luciferin Sodium Salt	50 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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