Technical Data Sheet

D-Luciferin Sodium Salt

Product Information

556875 **Material Number:** Size: 50 mg

Description

D-Luciferin (D-(-)-2-(6'-hydroxy-2'-benzothiazolyl)-thiazoline-4-carboxylic acid) is a synthetically made substrate which is specific for firefly luciferase in the illustrated reactions. This D-Luciferin is lyophilized, is in the monosodium salt form and has a molecular weight of 302.30. The D-Luciferin has been purified by HPLC techniques to remove dehydroluciferin and the L-Luciferin, both of which are competitive inhibitors of firefly luciferase. It is important to note, however, that D-Luciferin will 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) LH₂ + ATP + E \longrightarrow E·LH₂ AMP + PP_i
(2) E·LH₂ AMP + O₂ \longrightarrow E·P + AMP + CO₂+ Light

LH₂ = 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. Reconstituting the D-Luciferin in a non-buffered solution will allow it to come to the reaction pH easily. The solution should be at pH 6.0 to 6.3. If the pH of the solution increases as a result of reconstitution or during storage, there will be a slow racemization of the D-isomer to the L-isomer. After reconstitution, store refrigerated (4°C), and protected from light for up to 2 weeks or for up to 1 year frozen (-20°C), aliquoted, and protected from light.

Suggested Companion Products

Catalog Number	Name	Size	Clone	
556866	Enhanced Luciferase Assay Kit	100 tests	(none)	
556876	D-Luciferin Sodium Salt	100 mg	(none)	
556871	3X Cell Lysis Buffer	50 ml	(none)	

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