D-Luciferin, free acid

Cat. No. DYE-175 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Description	Luciferin is the most popular and versatile bioluminescent substrate. The firefly luciferase/luciferin bioluminescent system is found in the firefly (Photinus pyralis) and several other beetles. Luciferase oxidizes ATP-activated luciferin through a dioxetanone intermediate. Firefly luciferase produces light by the ATP-dependent oxidation of luciferin. The 560 nm chemiluminescence from this reaction peaks within seconds, with light output that is proportional to luciferase activity when luciferin and ATP are present in excess. Firefly luciferase has long been conjugated to antibodies and used as a label in immunoassays using luciferin as the substrate for detection. Compared to HRP and alkaline phosphatase, luciferase is less tolerant to chemical modifications. One particular advantage to the enzyme is that there is low endogenous luciferase activity in mammalian tissues besides its high sensitivity. Another important use of luciferase is in the area of hygiene monitoring. The luciferase/luciferin system can be used to detect contamination because ATP, present in all living organisms, is required to produce luminescence. The main application for this type of ATP bioluminescence is quality assurance by testing surfacesn food processing plants to determine whether or not there is ontamination of either quipment or products.
CAS number	2591-17-5
Molecular Mass	280.32
Formula	C11H8N2O3S2

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Ex(nm)	328
Em(nm)	533
Solvent	DMSO
Storage	Store at -20°C in the dark. Dessicated.

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