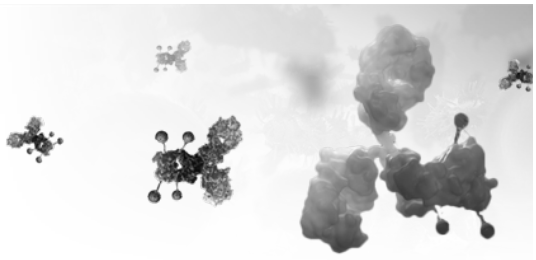

Firefly Luciferase (aa 1 - 550) [His] (DAG1739)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Firefly Luciferase (BAF48390, 1 a.a. - 550 a.a.) full-length recombinant protein with His tag expressed inEscherichia coli .
Antigen Description	Firefly luciferase generates light from luciferin in a multistep process. First, D-luciferin is adenylated by MgATP to form luciferyl adenylate and pyrophosphate. After activation by ATP, luciferyl adenylate is oxidized by molecular oxygen to form a dioxetanone ring. A decarboxylation reaction forms an excited state of oxyluciferin, which tautomerizes between the keto-enol form. The reaction finally emits light as oxyluciferin returns to the ground state.
Species	Firefly
Purity	Conventional Chromatography
Conjugate	His
Applications	SDS-PAGE
Format	Liquid
Concentration	1 mg/ml
Size	100 µg
Buffer	In 20 mM Tris-HCl, pH 8.0 (1 mM DTT, 10% glycerol)
Preservative	None
Storage	2-8°C short term, -20°C long term

BACKGROUND

Introduction	Luciferase from the firefly has become one of the more widely used reporter proteins for the

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study of gene expression. Luciferase catalyzes a bioluminescent reaction which requires the substrate luciferin as well as Mg2+ and ATP. Mixing these reagents with the cell extract containing luciferase, results in a flash of light that decays rapidly. This light can be detected by a luminometer. The total light emission is proportional to the luciferase activity of the sample.

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