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# Luciferase Firefly

**Description:**Luciferase produced in E.Coli is a single, non-glycosylated polypeptide chain containing 571 amino acids (1-550 a.a.) and having a molecular mass of 62.9kDa.Luciferase is fused to a 21 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Synonyms:Luciferase-like monooxygenase, LUC, EC 1.13.12.7.

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless solution.

Amino Acid Sequence:MGSSHHHHHH SSGLVPRGSH MMEDAKNIKK GPAPFYPLED GTAGEQLHKA MKRYALVPGT IAFTDAHIEV DITYAEYFEM SVRLAEAMKRYGLNTNHRIV VCSENSLQFF MPVLGALFIG VAVAPANDIY NERELLNSMG ISQPTVVFVS KKGLQKILNV QKKLPIIQKI IIMDSKTDYQGFQSMYTFVT SHLPPGFNEY DFVPESFDRD KTIALIMNSS GSTGLPKGVA LPHR

Purity:Greater than 90.0% as determined by SDS-PAGE.

### Formulation:

The Luciferase protein solution (1mg/ml) contains 20mM Tris-HCl buffer (pH-8), 1mM DTT, and 10% glycerol.

#### Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

#### Usage:

NeoBiolabs products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drµgs, agricultural or pesticidal products, food additives or household chemicals.

## Introduction:

Luciferase is a general term for the class of oxidative enzymes used in bioluminescence and is distinct from a photoprotein. Luciferase catalyzes a bioluminescent reaction which involves the substrate luciferin as well as Mg2+ and ATP, produces green light with a wavelength of 562 nm. Luciferase from firefly is broadly used as a reporter for studying gene regulation and function, and for pharmaceutical screening.

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