

Recombinant firefly Luciferase protein

Catalog Number: ATGP3928

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-550aa

UniProt No.

A3KBZ5

NCBI Accession No.

AB261982

Alternative Names

Luciferin 4-monooxygenase, LuC

PRODUCT SPECIFICATION

Molecular Weight

63 kDa (571aa) confirmed by MALDI-TOF

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol

Purity

> 90% by SDS-PAGE

Biological Activity

Specific activity is 1×10^{10} lightunit/mg. One luciferase enzymeunit will produce one Relative Light Unit (RLU) at 25C

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

Luciferase is a generic term for the class of oxidative enzymes used in bioluminescence and is distinct from a photoprotein. Luciferase catalyzes a bioluminescent reaction which requires the substrate luciferin as well as Mg^{2+} and ATP, produces green light with a wavelength of 562 nm. Luciferase from firefly is widely used as a

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reporter for studying gene regulation and function, and for pharmaceutical screening. Recombinant firefly Luciferase, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH M>MEDAKNIKK GPAPFYPLED GTAGEQLHKA MKRYALVPGT IAFTDAHIEV
NITYAEYFEM SVRLAEAMKR YGLNTNHRIV VCSENSLQFF MPVLGALFIG VAVAPANDIY NERELLNSMN ISQPTVVFVS
KKGLQKILNV QKKLPPIQKI IIMDSKTDYQ GFQSMYTFVT SHLPPGFNEY DFVPESFDRD KTIALIMNSS GSTGLPKGVA
LPHRTACVRF SHARDPIFGN QIIPDTAILS VVPFHGFGM FTTLGYLICG FRVVLMYRFE EELFLRSLQD YKIQSALLVP
TLFSFFAKST LIDKYDLSNL HEIASGGAPL SKEVGEAVAK RFHLPGIRQG YGLTETTSI LITPEGDDKP GAVGKVVPPF
EAKVVDLDTG KTLGVNQRGE LCVRGPMIMS GYVNNPEATN ALIDKDGWLH SGDLAYWDED EHFFIVDRK SLIKYKGYQV
APAELESILL QHPNIFDAGV AGLPDDDDAGE LPAAVVLEH GKTMTKEIV DYVASQVTTA KKLKRGVVFV DEVPKGLTGK
LDARKIREIL IKAKKGGKSK L

General References

Moore S A., et al. (1995) J Mol Biol. 249(1):195-214
Gould S J., et al. (1988) Anal Biochem. 175(1):5-13.

DATA

SDS-PAGE

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.

