

# Product Information

## One-Step Firefly Luciferase Assay Kit

Catalog Number: F6072

Product Size: 500 T, 1000 T

Contents:

Component	500 T	1000 T
A. One-Step Firefly Luciferase Assay Buffer	50 mL	100 mL
B. D-Luciferin	10 mg	20 mg

### Storage

Store at -80 °C. Component A is stable for at least 3 months at -20 °C and 6 months at -80 °C. Component B is stable for at least 6 months at -20 °C in dark. Firefly luciferase working solution (A + B) is stable for one month at -20 °C and 3 months at -80 °C and do not freeze and thaw repeatedly, it is recommended to pack in small batches.

### Description

Reporter gene detection is an important tool in field of modern molecular biology to analyze the potential cis elements (such as promoter, enhancer and silencer) and trans acting factors in flanking region of structural genes. Firefly luciferase is widely used in the research of gene regulation, function, drug screening and so on.

Firefly luciferase is a protein and molecular weight is about 61 kD. In the presence of ATP, magnesium ion and oxygen, it can catalyze the oxidation of luciferin to oxyluciferin. During the oxidation of luciferin, it will emit bioluminescence( Fig.1)

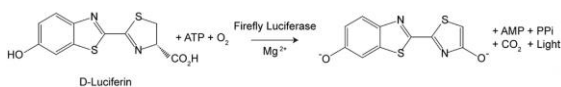


Fig.1 Luciferin oxidation catalyzed by firefly luciferase

### Protocol

#### Configure firefly luciferase working solution

1. Restore component A and B to room temperature, dissolve component B with component A, vortex and shake to ensure adequate dissolution.

Note: Firefly luciferase can not be frozen and thawed repeatedly. If usage amount of single experiment is rarely, it is recommended to pack into small size according to the amount of single experiment. At room temperature, the activity of the working solution decreased about 10% after 3 hours and 25% after 5 hours.

#### Chemiluminescence value detection

1. Take out cell culture plate from the incubator and incubate at 22-25 °C for 5-15 min to restore it to room temperature.
2. Add equal volume of medium and firefly luciferase working solution to the culture plate.
3. Incubate at room temperature for 5 min.

Note: The incubation time varied with the number of cell types.

4. Read the value with Microplate Reader or Chemiluminescence Instrument.

