

Product Specification Sheet

Luciferase Protein Antibodies

Cat. LUCF 11-A	Goat Anti-Luciferase IgG	SIZE: 100 ul
Cat. LUCF 11-BTN	Goat Anti-Luciferase IgG-Biotin conjugate	SIZE: 100 ul
Cat. LUCF 11-HRP	Goat Anti-Luciferase IgG-HRP conjugate	SIZE: 100 ul
Cat. LUCF11-C	Recombinant purified Luciferase protein WB +ve control	SIZE: 100 ul

Expression of genes in E. coli or yeast or baculovirus offers a convenient system to produce large amounts of recombinant proteins that may otherwise be difficult to isolate from natural cells and tissues. Very often antibodies to these newly identified proteins are not available to study its biochemical properties, monitor protein expression, and purification. In order to circumvent this problem, short pieces of well-defined peptides (Poly-His, Flag-epitope or c-myc epitope or HA-tag) or small proteins (bacterial GST, MBP, Thioredoxin, b-Galactosidase, VSV-Glycoprotein etc) are often cloned along with the target gene. Proteins are expressed as fusion proteins. Antibodies to these fusion-tags are already available to monitor fusion protein expression and purification. Therefore, fusion-tags serve as universal tags much like secondary antibodies. Many tags have their own characteristics. Poly-His-fusion proteins (6 x His) can bind to Nickel-Sepharose or Nickel-HRP. GST-fusion proteins can bind to glutathione-Sepharose. Therefore, a high degree of purification of fusion protein can be achieved in just one affinity purification step. Purity of fusion proteins can be followed by Tag-antibodies. Very often, fusion proteins are directly injected into animals to generate antibodies. Some fusion tags can be removed later by treatment with enzymes to generate tag-free recombinant proteins.

The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (100 ul) or **liquid** form (100 ul). Reconstitute powder in PBS in 0.5 ml to prepare 1 mg/ml solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Cat# LUCF 11-HRP

Purified antibody was coupled to HRP (RZ>3.0) using periodate method. The molar enzyme to protein (E/P) ratio = 4.0. The antibody is supplied in stabilizing buffer, 0.1% prolcin-300 as preservative in either **lyophilized** (0.1 ml) or **liquid** form (100 ul). Reconstitute powder in PBS in 1 ml. Store at 4oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:1,000-1:10,000 ELISA, 1:1K-1:5K for western, and 1:200-1:1000 (IHC).

Form & Storage of Antibodies

Store frozen in suitable aliquots. Avoid freeze and thaw. Do not store diluted solutions of antibodies and avoid freeze and thaw. Reconstitute powder in 100 ul PBS by soaking the antibody solution for 10-15 at room temp and light vortexing. Any particulate matter should be removed by centrifugation (10, 000 rpm, 5 min at 4oC). Store liquid in suitable aliquots at -20oC or below.

Recommended Usage

Anti-luciferase IgG have been tested by ELISA (suggested dilution 1K-10K) using 50-100 ng/well luciferase-coated ELISA plates. It recognizes both native and denatured fusion proteins in Western blots (suggested dilution 1:500-1:1K). Actual dilution of antibody will vary depending upon the type of technique used to detect primary antibody such calorimetric or chemiluminescence substrates.

Specificity of Antibodies

The antibodies react with Luciferase (firefly) in ELISA and Western. No significant reactivity is observed with Sea pansy (Renilla reniformis) luciferase.

This product is for in vitro research use only.

Related material available from ADI

Catalog#	ProdDescription
LUCF11-A	Anti-Luciferase (Fire fly) IgG
LUCF11-BTN	Anti-Luciferase (Fire fly) IgG-Biotin Conjugate
LUCF11-C	Recombinant purified Firefly Luciferase protein
WB +ve control	
LUCF11-HRP	Anti-Luciferase (Fire fly) IgG-HRP Conjugate

Purified GST, Monoclonal anti-GST, GST Coated ELISA plates; Anti-Rabbit HRP conjugates'

Western blot Recycling Kit; Strips antibodies in 5-10 min at room temp.
LUCF11-A-C-BTN-HRP 71216A

Source of Antigen and Antibodies

Antigen	Luciferase (Photinus pyralis) was expressed in E. coli and purified (>95%). It is ~100 kda (a dimer of two subunits of ~50 kda).
Ab Host/type	Goat, Polyclonal purified IgG, purified over antigen-agarose (Cat # LUCF11-A)
2-Ab	Rabbit Anti-goat IgG-HRP conjugate Cat # 30220 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Purified Luciferase Protein for WB +ve control, Cat # LUCF11-C, is formulated in SDS-PAGE sample buffer (reduced). This preparation is **not biologically inactive**. It is not suitable for ELISA or other applications where native protein is required. It is supplied in 100 ul/vial. For WB, heat once and load 10 ul/lane and visualize with appropriate antibodies. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Store frozen in suitable aliquots. Do not freeze, thaw, or heat repeatedly.

Cat# LUCF 11-BTN

Purified anti-luciferase IgG (#LUCF11-A) was coupled to Biotin using ADI Biotinylation kit # 80300 at F/P ratio ~10-20:1.