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Datasheet for 200-103-150-0100

Luciferase Antibody Peroxidase Conjugated

Overview

Description:	Anti-Luciferase (GOAT) Antibody Peroxidase Conjugated - 200-103-150-0100
Item No.:	200-103-150-0100
Size:	100 µL
Applications:	ELISA, WB, IHC
Reactivity:	Luciferase
Host Species:	Goat

Product Details

Background:	Anti luciferase Antibody recognizes luciferase that is commonly used in biological research as a reporter to assess the transcriptional activity in cells that are transfected with a genetic construct containing the luciferase gene under the control of a promoter of interest. Luciferase can also be used to detect the level of cellular ATP in cell viability assays or for kinase activity assays. Additionally proluminescent molecules that are converted to luciferin upon activity of a particular enzyme can be used to detect enzyme activity in coupled or two-step luciferase assays. Such substrates have been used to detect caspase activity and cytochrome P450 activity, among others.
Synonyms:	goat anti-Luciferase Antibody HRP Conjugation, Peroxidase Conjugated goat anti-Luciferase Antibody
Host Species:	Goat
Conjugate:	Peroxidase (HRP)
Clonality:	Polyclonal
Format:	IgG

Target Details

Reactivity:	Luciferase
Immunogen Type:	Native Protein
Immunogen:	Luciferase [Photinus pyralis (Firefly)]

Purity/Specificity:	This product is an IgG fraction antibody purified from monospecific antiserum by a multi-step process which includes delipidation, salt fractionation and ion exchange chromatography followed by extensive dialysis against the buffer stated above. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Peroxidase, anti-Goat Serum as well as purified and partially purified Luciferase [Photinus pyralis (Firefly)]. No reactivity is observed against Sea pansy (Renilla reniformis) luciferase.

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IHC (Based on references)
Application Note:	Anti-Luciferase Peroxidase conjugated antibody is produced from Photinus pyralis (Firefly) which produces a green light with a wavelength of 562 nm. Anti-Luciferase Peroxidase has been tested by ELISA and western blot. Expect a band at approximately 60.7 kDa in size corresponding to Luciferase by western blotting in the appropriate cell lysate or extract. Anti-Luciferase has been assayed against 1.0 ug of Luciferase [Photinus pyralis (Firefly)] in a standard capture ELISA using ABTS (2,2'-azino-bis-[3-ethylbenthiazoline-6-sulfonic acid]) code # ABTS-100 as a substrate for 30 minutes at room temperature. A working dilution of 1:50,000 to 1:200,000 of the reconstitution concentration is suggested for this product.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:30,000
WB:	1:500 - 1:2,000

Formulation

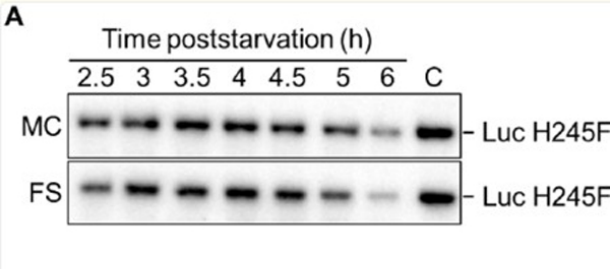
Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Gentamicin Sulfate. Do NOT add Sodium Azide!
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Reconstitution Volume:	100 µL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

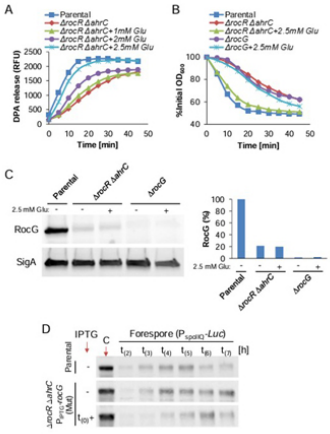
Shipping Condition:	Ambient

Storage Condition:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot
The relative ATP concentration rises in the mother cell and does not decline in the forespore during sporulation.
B. subtilis strains engineered to express luc H245F in the MC or the FS were starved to induce sporulation. At 2 h PS, culture aliquots were transferred to a 96-well plate, prior to measuring the luminescence intensity in arbitrary units (AU) and the Luc H245F level in AU by immunoblot analysis with anti-Luc antibodies. (A) Representative immunoblots showing Luc H245F levels in the MC and the FS during sporulation. A control sample (C) on the same blot was used for normalization of signal intensities.
Blots were probed with goat anti-Luciferase horseradish peroxidase (HRP) conjugate (1:10,000) (p/n 200-103-150).
Fig. 3. PMID: 32515031



Western Blot

The effect of glutamate supplementation during sporulation on ΔrocR ΔahrC germination. (A) LR33 (Parental), LR38 (ΔrocR ΔahrC) strains, lacking gudB, were grown in DSM medium with or without glutamate at the indicated concentrations. The corresponding spores were purified, and germination was followed by monitoring the relative fluorescence units (RFU) of Tb3+-DPA. Shown is a representative experiment out of three independent biological repeats. (B) LR33 (Parental), LR38 (ΔrocR ΔahrC), LR137 (ΔrocG) strains, lacking gudB, were grown in DSM sporulation medium with or without 2.5 mM glutamate. After 20 hrs of incubation, spores were purified, induced to germinate by L-Ala (10 mM) (t=0), and germination was followed by monitoring OD600 decrease. Shown is a representative experiment out of three independent biological repeats. (C) LR33 (Parental), LR38 (ΔrocR ΔahrC), LR137 (ΔrocG) strains, lacking gudB, were incubated in DSM medium supplemented with 2.5 mM glutamate. At t0 of sporulation, cells were collected and disrupted for protein extraction. Equal amounts of protein extracts were subjected to Western blot analysis (left panel) with antibodies against RocG or SigA, which serves as a loading control. Quantification of the RocG signal was shown as percentage of the parental signal (right panel). (D) LR209 [Parenal (PspoIIQ-luc)], LR227 [Mut (PspoIIQ-luc, PIPTG-rocG, ΔrocR ΔahrC)] strains were incubated in DSM medium to induce sporulation. At t0 of sporulation, IPTG was added to induce rocG expression, and samples were collected and disrupted for protein extraction at indicated sporulation time points. Equal amounts of protein extracts were subjected to Western blot analysis with antibody against Luciferase. C-indicates a loading control, derived from LR209 strain at t5.

Figure S9, related to Figure 5 and Figure 6. PMID: 36274945

References

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- Rao L et al. Glutamate catabolism during sporulation determines the success of the future spore germination. *iScience.* (2022)
- Parrell D et al. Channels modestly impact compartment-specific ATP levels during Bacillus subtilis sporulation and a rise in the mother cell ATP level is not necessary for Pro-σ K cleavage. *Mol Microbiol.* (2020)
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