Datasheet for ABIN2344798

GFP ELISA Kit

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Overview

Quantity:	96 tests
Target:	GFP
Reactivity:	Aequorea victoria
Method Type:	Sandwich ELISA
Application:	ELISA

Product Details

Sample Type:	Cell Samples, Tissue Lysate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Sensitivity:	30 pg/mL
Characteristics:	GFP ELISA Kit is an enzyme immunoassay developed for detection and quantitation of GFP or GFP fusion protein in cell or tissue samples. The quantity of GFP or its variants (including BFP, CFP and YFP) in an unknown sample is determined by comparing its absorbance with that of a known recombinant GFP standard curve. The kit has detection sensitivity limit of 30 pg/mL GFP. The kit also provides an efficient system for rapid quantitation of GFP lentivirus titer for both viral supernatant and purified virus. Each kit provides sufficient reagents to perform up to 96 assays including standard curve and GFP samples.
Components:	1. Anti-GFP Antibody Coated Plate : One 96-well strip plate (8 x 12). 2. Biotinylated Anti-GFP Antibody (1000X) : One 20 µL vial of biotinylated antibody recognizing jellyfish Aequorea Victoria GFP and its variants. 3. Streptavidin-Enzyme Conjugate : One 20 µL vial

Product Details

	4. Assay Diluent : One 50 mL bottle. 5. 10X Wash Buffer : One 100 mL bottle. 6. Substrate Solution : One 12 mL amber bottle. 7. Stop Solution (Part. No. 310808): One 12 mL bottle. 2 Box 2 (shipped on blue ice packs)
Material not included:	1. GFP Sample: cell or tissue lysate 2. 10 µL to 1000 µL adjustable single channel micropipettes with disposable tips 3. 50 µL to 300 µL adjustable multichannel micropipette with disposable tips 4. Multichannel micropipette reservoir 5. Microplate reader capable of reading at 450 nm (620 nm as optional reference wave length)

Target Details

Target:	GFP
Alternative Name:	GFP (GFP Products)
Target Type:	Viral Protein
Background:	Green fluorescent protein (GFP) is a spontaneously fluorescent protein isolated from the pacific jellyfish, Aequorea victoria. It transduces the blue chemiluminescence into green fluorescent light. Since the molecular cloning of GFP cDNA and demonstration of GFP as a functional transgene, GFP has become a powerful tool with exciting applications in developmental, cell and molecular biology. GFP fluorescence is not species specific and can be expressed in bacteria, yeast, plant and mammalian cells. GFP can fuse with proteins of interest without interfering significantly with their assembly and function. Based on the structure of the GFP molecule, many GFP variants have been created with much improved fluorescence emission, or shifted excitation or emission spectra that are well suited for fluorescence microscopy and flow cytometry. Although GFP expression can be easily detected under a fluorescence microscope, GFP fluorescence intensity varies from cell to cell because of the heterogeneity nature of GFP expression. In order to quantitate the GFP expression in cells, FACS analysis is usually required, which is both expensive and time consuming.

Application Details

Comment:	• Detect as little as 30 pg/mL of GFP • Simpler and faster than FACS analysis • GFP ELISA Kit will detect GFP, BFP, CFP, and YFP from Aequorea victoria
Plate:	Pre-coated

Application Details

Reagent Preparation:	• 1X Wash Buffer: Dilute the 10X Wash Buffer Concentrate to 1X with deionized water. Stir to homogeneity. • Anti-GFP Antibody and Streptavidin-Enzyme Conjugate: Immediately before use dilute the Biotinylated Anti-GFP antibody 1:1000 and the Streptavidin-Enzyme Conjugate 1:2000 with Assay Diluent. Do not store diluted solutions.
Assay Procedure:	1. Prepare cell or tissue lysates containing GFP or GFP fusion protein. Note: Because the ELISA kit has a linear range of 30 pg/mL to 2 ng/mL, we recommend using assay diluent to make series of 2-fold dilutions for each unknown sample. 2. Add 100 µL of GFP sample or GFP standard to the Anti-GFP Antibody Coated Plate. Each GFP sample, GFP standard and blank should be assayed in duplicate. 3. Incubate at 37 °C for at least 2 hours or 4 °C overnight. 4. Wash microwell strips 3 times with 250 µL 1X Wash Buffer per well with thorough aspiration between each wash. After the last wash, empty wells and tap microwell strips on absorbent pad or paper towel to remove excess 1X Wash Buffer. 5. Add 100 µL of the diluted biotinylated anti-GFP antibody to each well. 6. Incubate at room temperature for 2 hours on an orbital shaker. 7. Wash the strip wells 3 times according to step 4 above. 8. Add 100 µL of the diluted Streptavidin-Enzyme Conjugate to all wells. 9. Incubate at room temperature for 1 hour on an orbital shaker. 10. Wash the strip wells 3 times according to step 4 above. Proceed immediately to the next step. 11. Warm Substrate Solution to room temperature. Add 100 µL of Substrate Solution to each well, including the blank wells. Incubate at room temperature on an orbital shaker. Actual incubation time may vary from 2-30 minutes. Note: Watch plate carefully, if color changes rapidly, the reaction may need to be stopped sooner to prevent saturation. 12. Stop the enzyme reaction by adding 100 µL of Stop Solution into each well, including the blank wells. Results should be read immediately (color will fade over time). 13. Read absorbance of each microwell on a spectrophotometer using 450 nm as the primary wave length. 4
Restrictions:	For Research Use only

Handling

Storage:	4 °C/-80 °C
Storage Comment:	Upon receipt, aliquot and store recombinant GFP Standard at -80°C and avoid freeze/thaw. Store all other components at 4°C.

Publications

Product cited in:	Loperfido, Jarmin, Dastidar, Di Matteo, Perini, Moore, Nair, Samara-Kuko, Athanasopoulos,

Publications

Tedesco, Dickson, Sampaolesi, VandenDriessche, Chuah: "piggyBac transposons expressing full-length human dystrophin enable genetic correction of dystrophic mesoangioblasts." in: **Nucleic acids research**, Vol. 44, Issue 2, pp. 744-60, (2016) (PubMed).

Li, Liu, Li, Sun, Xu, Xie, Zhang: "PTPRR regulates ERK dephosphorylation in depression mice model." in: **Journal of affective disorders**, Vol. 193, pp. 233-41, (2016) (PubMed).

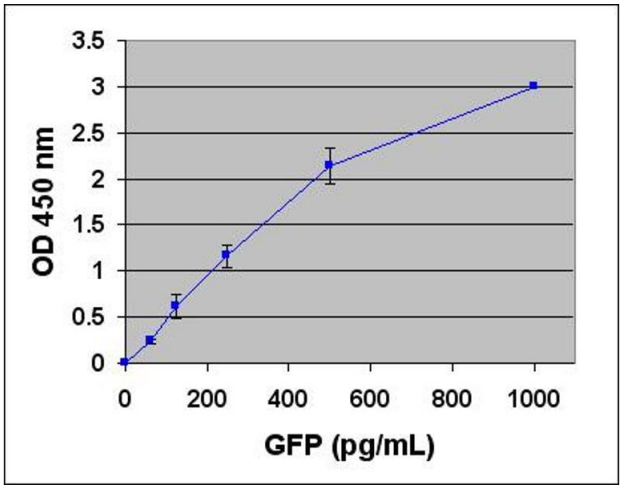
Madison, Roller, Okeoma: "Human semen contains exosomes with potent anti-HIV-1 activity." in: **Retrovirology**, Vol. 11, pp. 102, (2015) (PubMed).

Rohrbach, Jarboe, Anderson, Trummell, Hicks, Weaver, Yang, Oster, Deshane, Steele, Siegal, Bonner, Willey: "Targeting the effector domain of the myristoylated alanine rich C-kinase substrate enhances lung cancer radiation sensitivity." in: **International journal of oncology**, Vol. 46, Issue 3, pp. 1079-88, (2015) (PubMed).

Noh, Maze, Zhao, Xiang, Wenderski, Lewis, Shen, Li, Allis: "ATRX tolerates activity-dependent histone H3 methyl/phos switching to maintain repetitive element silencing in neurons." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 112, Issue 22, pp. 6820-7, (2015) (PubMed).

There are more publications referencing this product on: Product page

Images



ELISA

Image 1. Standard Curve Generated with the GFP ELISA Kit.