

GFP (K-16): sc-33856

BACKGROUND

The green fluorescent protein (GFP) was originally identified as a protein involved in the bioluminescence of the jellyfish *Aequorea victoria*. GFP cDNA produces a fluorescent product when expressed in prokaryotic cells, without the need for exogenous substrates or cofactors, making GFP a useful tool for monitoring gene expression and protein localization *in vivo*. Several GFP mutants have been developed, including EGFP, which fluoresce more intensely than the wildtype GFP and have shifted excitation maxima, making them useful for FACS and fluorescence microscopy as well as double-labeling applications. GFP is widely used in expression vectors as a fusion protein tag, allowing expression and monitoring of heterologous proteins fused to GFP.

REFERENCES

1. Prasher, D.C., et al. 1992. Primary structure of the *Aequorea victoria* green-fluorescent protein. *Gene* 111: 229-233.
2. Chalfie, M., et al. 1994. Green fluorescent protein as a marker for gene expression. *Science* 263: 802-805.
3. Inoué, S., et al. 1994. *Aequorea* green fluorescent protein. Expression of the gene and fluorescence characteristics of the recombinant protein. *FEBS Lett.* 341: 277-280.
4. Cormack, B.P., et al. 1996. FACS-optimized mutants of the green fluorescent protein (GFP). *Gene* 173: 33-38.
5. Rizzuto, R., et al. 1996. Double labelling of the subcellular structures with organelle-targeted GFP mutants *in vivo*. *Curr. Biol.* 6: 183-188.
6. Ishikura, H., et al. 2004. Green fluorescent protein expression and visualization of mediastinal lymph node metastasis of human lung cancer cell line using orthotopic implantation. *Anticancer Res.* 24: 719-723.
7. Nowak, K., et al. 2004. Fluorescent proteins in poplar: a useful tool to study promoter function and protein localization. *Plant Biol.* 6: 65-73.

SOURCE

GFP (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GFP of *Renilla reniformis* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33856 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

GFP (K-16) is recommended for detection of green fluorescent protein of *Renilla reniformis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of GFP: 27 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Panda, D., et al. 2011. RNAi screening reveals requirement for host cell secretory pathway in infection by diverse families of negative-strand RNA viruses. *Proc. Natl. Acad. Sci. USA* 108: 19036-19041.
2. Mohan, R.R., et al. 2011. Efficacious and safe tissue-selective controlled gene therapy approaches for the cornea. *PLoS ONE* 6: e18771.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **GFP (B-2): sc-9996** or **GFP (C-2): sc-390394**, our highly recommended monoclonal alternatives to GFP (K-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **GFP (B-2): sc-9996**.