

GFP (15): sc-101525



The Power to Question

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.

SOURCE

GFP (15) is a mouse monoclonal antibody raised against recombinant GFP.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GFP (15) is recommended for detection of GFP by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of GFP: 27 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

STORAGE

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

SELECT PRODUCT CITATIONS

1. Deng, L., et al. 2009. Hepatitis B virus inhibition in mice by lentiviral vector mediated short hairpin RNA. *BMC Gastroenterol.* 9: 73.
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3. Hench, J., et al. 2011. A tissue-specific approach to the analysis of metabolic changes in *Caenorhabditis elegans*. *PLoS ONE* 6: e28417.
4. Yavagal, D.R., et al. 2014. Efficacy and dose-dependent safety of intra-arterial delivery of mesenchymal stem cells in a rodent stroke model. *PLoS ONE* 9: e93735.
5. Oshiro, H., et al. 2015. Establishment of successively transplantable rabbit VX2 cancer cells that express enhanced green fluorescent protein. *Med. Mol. Morphol.* 48: 13-23.
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7. Mukherjee, D., et al. 2016. Krüppel-like factor 8 activates the transcription of C-X-C cytokine receptor type 4 to promote breast cancer cell invasion, transendothelial migration and metastasis. *Oncotarget* 7: 23552-23568.
8. Steens, J., et al. 2017. *In vitro* generation of vascular wall-resident multipotent stem cells of mesenchymal nature from murine induced pluripotent stem cells. *Stem Cell Rep.* 8: 919-932.
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10. Goel, R.K., et al. 2018. Phosphoproteomics analysis identifies novel candidate substrates of the non-receptor tyrosine kinase, SRMS. *Mol. Cell. Proteomics* 17: 925-947.
11. Goel, R.K., et al. 2018. Global phosphoproteomic analysis identifies SRMS-regulated secondary signaling intermediates. *Proteome Sci.* 16: 16.
12. Zhang, Y., et al. 2018. nNOS-CAPON interaction mediates Amyloid-β-induced neurotoxicity, especially in the early stages. *Aging Cell* 17: e12754.
13. Ding, X.F., et al. 2018. Never-in-mitosis A-related kinase 8, a novel target of von-Hippel-Lindau tumor suppressor protein, promotes gastric cancer cell proliferation. *Oncol. Lett.* 16: 5900-5906.
14. Zeng, J., et al. 2019. TRIM9-mediated resolution of neuroinflammation confers neuroprotection upon ischemic stroke in mice. *Cell Rep.* 27: 549-560.e6.

RESEARCH USE

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