SANTA CRUZ BIOTECHNOLOGY, INC.

RrGFP (1-233): sc-33150

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 wild type GFP and have shifted excitation maxima, making them useful for FACS and fluorescence microscopy as well as double-labeling applications. Recently, GFP has been isolated from other organisms as well, such as *Renilla muelleri* (RmGFP) and *Renilla reniformis* (RrGFP). 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., Eckenrode, V.K., Ward, W.W., Prendergast, F.G. and Cormier, M.J. 1992. Primary structure of the *Aequorea victoria* green-fluorescent protein. Gene 111: 229-233.
2. Chalfie, M., Tu, Y., Euskirchen, G., Ward, W.W. and Prasher, D.C. 1994. Green fluorescent protein as a marker for gene expression. Science 263: 802-805.
3. Inouye, S. and Tsuji, F.I. 1994. Aequorea green fluorescent protein. Expression of the gene and fluorescence characteristics of the recombinant protein. FEBS Letts. 341: 277-280.
4. Cormack, B.P., Valdivia, R.H. and Falkow, S. 1996. FACS-opitmized mutants of the green fluorescent protein (GFP). Gene 173: 33-38.
5. Rizzuto, R., Brini, M., De Giorgi, F., Rossi, R., Heim, R., Tsien, R.Y. and Pozzan, T. 1996. Double labelling of the subcellular structures with organelle-targeted GFP mutants *in vivo*. Curr.Biol. 6: 183-188.

SOURCE

RrGFP (1-233) is a rabbit polyclonal antibody raised against amino acids 1-233 representing full length 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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

APPLICATIONS

RrGFP (1-233) is recommended for detection of RrGFP fusion proteins of *Renilla reniformis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], 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).

Positive Controls: RrGFP fusion proteins.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.