SANTA CRUZ BIOTECHNOLOGY, INC.

GFP (F56-6A1): sc-53882

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

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, makes GFP a useful tool for monitoring gene expression and protein localization *in vivo*. Several GFP mutants have been developed, including EGFP, which fluoresces more intensely than the wildtype GFP. Their shifted excitation maxima is more favorable 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. Inouye, 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-opitmized mutants of the green fluorescent protein (GFP). Gene 173: 33-38.

SOURCE

GFP (F56-6A1) is a mouse monoclonal antibody raised against full length GFP.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GFP (F56-6A1) is recommended for detection of GFP 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of GFP: 27 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

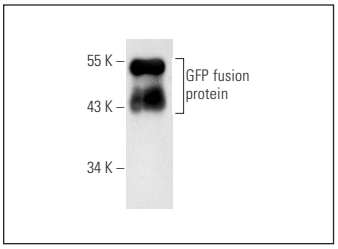
STORAGE

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.

DATA



GFP (F56-BA1): sc-53882. Western blot analysis of recombinant GFP fusion protein.

SELECT PRODUCT CITATIONS

1. Wu, Y.C., et al. 2008. Modification of papillomavirus E2 proteins by the small ubiquitin-like modifier family members (SUMOs). Virology 378: 329-338.
2. Wu, Y.C., et al. 2009. Host cell sumoylation level influences papillomavirus E2 protein stability. Virology 387: 176-183.
3. Greco, A., et al. 2010. Eradication of therapy-resistant human prostate tumors using an ultrasound-guided site-specific cancer terminator virus delivery approach. Mol. Ther. 18: 295-306.
4. Hu, Z., et al. 2012. GEP100/Arf6 is required for epidermal growth factor-induced ERK/Rac1 signaling and cell migration in human hepatoma Hep G2 cells. PLoS ONE 7: e38777.
5. Li, J., et al. 2013. Merkel cell polyomavirus large T antigen disrupts host genomic integrity and inhibits cellular proliferation. J. Virol. 87: 9173-9188.
6. Rosselló, C.A., et al. 2016. γ-Tubulin coordinates nuclear envelope assembly around chromatin. Heliyon 2: e00166.
7. Wang, S., et al. 2017. Densin-180 controls the trafficking and signaling of L-type voltage-gated $Ca_V1.2$ Ca^{2+} channels at excitatory synapses. J. Neurosci. 37: 4679-4691.
8. Robin, G.P., et al. 2018. Subcellular localization screening of *Colletotrichum higginsianum* effector candidates identifies fungal proteins targeted to plant peroxisomes, Golgi bodies, and microtubules. Front. Plant Sci. 9: 562.
9. Zhu, Q., et al. 2019. Viral-mediated AURKB cleavage promotes cell segregation and tumorigenesis. Cell Rep. 26: 3657-3671.e5.
10. Jebessa, Z.H., et al. 2019. The lipid droplet-associated protein ABHD5 protects the heart through proteolysis of HDAC4. Nat. Metab. 1: 1157-1167.