SANTA CRUZ BIOTECHNOLOGY, INC.

GFP (C-2): sc-390394

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.

SOURCE

GFP (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 167-182 within an internal region of GFP of *Aequorea victoria* origin.

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.

GFP (C-2) is available conjugated to agarose (sc-390394 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390394 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390394 PE), fluorescein (sc-390394 FITC), Alexa Fluor® 488 (sc-390394 AF488), Alexa Fluor® 546 (sc-390394 AF546), Alexa Fluor® 594 (sc-390394 AF594) or Alexa Fluor® 647 (sc-390394 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390394 AF680) or Alexa Fluor® 790 (sc-390394 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390394 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GFP (C-2) is recommended for detection of GFP and GFP mutant fusion proteins by Western Blotting (starting dilution 1:100, 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).

Molecular Weight of GFP: 27 kDa.

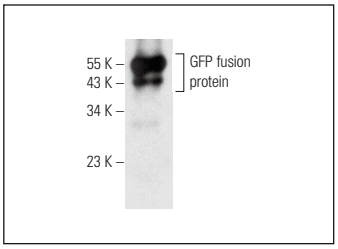
RECOMMENDED SUPPORT REAGENTS

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). 3) 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.

STORAGE

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

DATA



GFP (C-2): sc-390394. Western blot analysis of recombinant GFP fusion protein.

SELECT PRODUCT CITATIONS

1. Mitra, R.S., et al. 2003. Rap1A and rap1B ras-family proteins are prominently expressed in the nucleus of squamous carcinomas: nuclear translocation of GTP-bound active form. Oncogene 22: 6243-6256.
2. Donninger, H., et al. 2011. RASSF1A and the rs2073498 cancer associated SNP. Front. Oncol. 1: 54.
3. Ganguly, K., et al. 2013. Matrix metalloproteinase (MMP) 9 transcription in mouse brain induced by fear learning. J. Biol. Chem. 288: 20978-20991.
4. Schmidt, M.L., et al. 2014. Ras regulates SCF(β-TrCP) protein activity and specificity via its effector protein NORE1A. J. Biol. Chem. 289: 31102-31110.
5. Donninger, H., et al. 2015. The RASSF1A tumor suppressor regulates XPA-mediated DNA repair. Mol. Cell. Biol. 35: 277-287.
6. Guerreiro, P.S., et al. 2016. LRRK2 promotes Tau accumulation, aggregation and release. Mol. Neurobiol. 53: 3124-3135.
7. Lapaquette, P., et al. 2017. Shigella entry unveils a calcium/calpain-dependent mechanism for inhibiting sumoylation. Elife 6: e27444.
8. Jung, J.H., et al. 2018. Zinc finger protein 746 promotes colorectal cancer progression via c-Myc stability mediated by glycogen synthase kinase 3β and F-box and WD repeat domain-containing 7. Oncogene 37: 3715-3728.
9. Zhang, W., et al. 2019. Single-nucleotide polymorphisms in a short basic motif in the ABC transporter ABCG2 disable its trafficking out of endoplasmic reticulum and reduce cell resistance to anticancer drugs. J. Biol. Chem. 294: 20222-20232.
10. He, T.S., et al. 2020. ALG-2 couples T cell activation and apoptosis by regulating proteasome activity and influencing MCL1 stability. Cell Death Dis. 11: 5.

RESEARCH USE

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