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Product Information

Anti-Green Fluorescent Protein (GFP) antibody, Mouse monoclonal
clone GFP-20, purified from hybridoma cell culture

Product Number **SAB4200681**

Product Description

Anti-Green Fluorescent Protein (GFP) (mouse IgG1 isotype) is derived from the GFP-20 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from mouse BALB/c mice immunized with a GFP tagged fusion protein. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Anti-Green Fluorescent Protein (GFP) recognizes N-terminal and C-terminal GFP (27 kDa) tagged fusion proteins using Immunoblotting, Immunoprecipitation, dot blot, ELISA[1] and SEM[2]. The antibody reacts with fusion proteins expressed by prokaryotes expression vectors.

Recombinant DNA technology enables the insertion of genes of interest to specific sequences or genes. This can provide tags designed to enable the selective identification and purification of the protein of interest.[3-5] The addition of a green fluorescent protein (GFP) tag to a given gene, creates a stable fusion product that does not appear to interfere with the bioactivity or the biodistribution of the GFP tagged protein product.[6-10] GFP is a 27kDa protein, derived from the bioluminescent jellyfish *Aequorea victoria*, in which light is produced when energy is transferred from the Ca^{2+} -activated photoprotein aequorin to GFP.[11-13] GFP is acknowledged as a unique tool to monitor dynamic processes in a variety of living cells or organisms. When expressed in either eukaryotic or prokaryotic cells and illuminated by blue or UV light, GFP yields a bright green fluorescence. Exogenous substrates and cofactors are not required for the fluorescence of GFP, since GFP autocatalytically forms a fluorescent pigment from natural amino acids present in the nascent protein. Additionally, detection of GFP and its variants can be performed with living tissues instead of fixed samples. GFP signals can be quantified by flow cytometry, confocal scanning laser microscopy and fluorometric assays.[14] Monoclonal antibody reacting specifically with GFP may be useful in various immunotechniques, to identify the expression of a GFP fusion protein in situ and by immunoblotting, in bacteria, bacterial lysates or cells and tissues transfected with a GFP fusion protein expressing vectors.[15] It may also be used to correlate levels of GFP protein expression with fluorescence intensity and for the immunoprecipitation of GFP fusion proteins.[16]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 μg/mL is recommended using whole extract of human HEK-293T cells over-expressing GFP tagged fusion protein.

Immunoprecipitation: a working amount of 5-10 μg is recommended using whole extract of human HEK-293T cells over-expressing GFP tagged fusion protein.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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