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Datasheet for 000-001-215

# Green Fluorescent Protein (GFP) Control Protein

## Overview

| | |
|---|---|
| **Description:** | Recombinant Green Fluorescent Protein (GFP) Control Protein - 000-001-215 |
| **Item No.:** | 000-001-215 |
| **Size:** | 100 µg |
| **Applications:** | SDS-PAGE, WB, Microarray |
| **Origin:** | Aequorea victoria |
| **Expressed in:** | E. coli |

## Product Details

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|---|---|
| **Background:** | Green Fluorescent Protein (GFP) is used as a positive control when detecting GFP fusion proteins in Anti-GFP antibody assays. Rockland offers multiple purified hosts and conjugated Anti-GFP that can detect GFP by ELISA (sandwich or capture) or western blot. Biotin conjugated polyclonal Anti-GFP used in a sandwich ELISA is well suited to titrate GFP in solution when used in combination with monoclonal Anti-GFP (p/n 600-301-215), using either form of the antibody as the capture or detection antibody. |
| **Synonyms:** | control protein, rGFP protein, GFP fusion protein, GFP control |
| **Species of Origin:** | Aequorea victoria |
| **Expressed in:** | E. coli |

## Target Details

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|---|---|
| **Purity/Specificity:** | GFP control protein was synthesized with an amino terminal 6XHIS tag and was expressed in E. coli and purified by sequential hydrophobic interaction chromatography, DEAE chromatography and size-exclusion chromatography. Assay by immunoelectrophoresis resulted in a single precipitin arc against Anti-GFP. Analysis by SDS-PAGE resulted in a pattern consistent with purified GFP and was estimated to be greater than 90% pure. |
| **Relevant Links:** | • UniProtKB - P42212 |

## Application Details

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|---|---|
| **Tested Applications:** | SDS-PAGE, WB |
| **Suggested Applications:** | Microarray (Based on references) |
| **Application Note:** | GFP Control is suitable as a control for polyclonal or monoclonal Anti-GFP in immunological assays. Researchers should determine optimal titers for applications. The molecular weight of GFP is 28 kDa. Green Fluorescent Protein has been tested in SDS-page, western blot, and immunoprecipitation. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | User Optimized |
| **IP:** | User Optimized |
| **WB:** | User Optimized |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1.0 mg/mL by BCA assay |
| **Buffer:** | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| **Preservative:** | 0.01% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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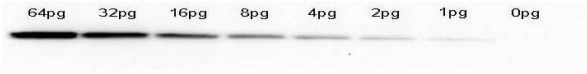
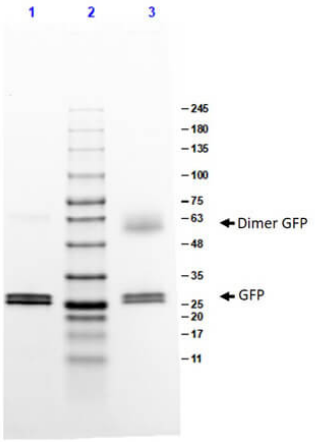
|---|---|
| **Shipping Condition:** | Dry Ice |
| **Storage Condition:** | Store GFP at -20 °C prior to opening. Aliquot contents and freeze at -20 °C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4 °C as an undiluted liquid. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is six (6) months from date of receipt. |

## Images



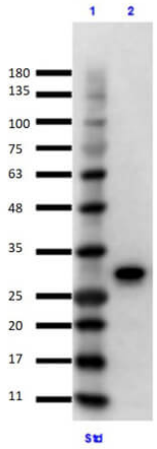

**Western Blot**

Western Blot of anti-GFP monoclonal antibody. Lane 1: 64pg of recombinant GFP protein (p/n 000-001-215) were spiked into a HeLa cell-derived lysates (p/n W09-000-364). Lane 2: 32pg of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Lane 3: 16pg of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Lane 4: 8pg of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Lane 5: 4pg of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Lane 6: 2pg of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Lane 7: 1g of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Lane 8: 0pg of recombinant GFP protein were spiked into a HeLa cell-derived lysates. Primary antibody: anti-GFP monoclonal antibody at 1:400 for overnight at 4°C. Secondary antibody: HRP-conjugated anti-Mouse IgG (p/n 610-4302) was performed at a dilution of 1:20,000 for 1h at 4°C. Block: TTBS (p/n MB-013) supplemented with 1% BSA (p/n BSA-50) for 1 h at 4°C. Predicted/Observed size: 27 kDa for GFP. Other band(s): none.




**SDS-PAGE**

SDS-PAGE results of Recombinant GFP Control Protein. Lane 1: Recombinant GFP Control Protein Reduced (1.0µg). Lane 2: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 3: Recombinant GFP Control Protein Non-Reduced (1.0µg). Predicted MW: ~28kDa. Observed MW: ~28kDa doublet, ~60kDa dimer. 4-20% Gel Coomassie Stained.




**Western Blot**
Immunoprecipitation/Western Blot using GFP Protein. Lane 1: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 2: GFP Input (p/n 000-001-215) Reduced [10µL]. Primary IP Antibody: Mouse Anti-GFP (p/n 600-301-215) at 10µg overnight at 2-8°C. Secondary Antibody: TrueBlot Anti-Mouse Ig IP Agarose Beads (p/n 00-8811-25) at 500µg for 1hr at RT. Buffer: BlockOut Buffer (p/n MB-073) for 30 mins at RT. Exposure: 7 sec.

## References


- Dufour YS et al. Direct correlation between motile behavior and protein abundance in single cells. *PLoS Comput Biol.* (2016)
- Pla-Roca, M et al. Antibody colocalization microarray: a scalable technology for multiplex protein analysis in complex samples. *Molecular & Cellular Proteomics : Mcp* (2012)


## Disclaimer