

**Datasheet for 200-341-215****GFP Antibody Dylight™ 488 Conjugated****Overview**

|                      |                                                                            |
|----------------------|----------------------------------------------------------------------------|
| <b>Description:</b>  | Anti-GFP (MOUSE) Monoclonal Antibody DyLight™ 488 Conjugated - 200-341-215 |
| <b>Item No.:</b>     | 200-341-215                                                                |
| <b>Size:</b>         | 100 µg                                                                     |
| <b>Applications:</b> | ELISA, WB, IF                                                              |
| <b>Reactivity:</b>   | GFP, eGFP, rGFP                                                            |
| <b>Host Species:</b> | Mouse                                                                      |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                           |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>   | GFP monoclonal antibody is Dylight™ 488 Conjugated. This product is also suitable for multiplex analysis, including multicolor imaging, utilizing various commercial platforms. DyLight™ dyes are exceptionally bright and photostable and are optimized for microscopy and microarray detection methods. |
| <b>Synonyms:</b>     | mouse anti-GFP Antibody Dylight™ 488 Conjugation, Dylight™ 488 Conjugated mouse anti-GFP Antibody, GFP, Green Fluorescent Protein, GFP antibody, Green Fluorescent Protein antibody, EGFP, enhanced Green Fluorescent Protein, Aequorea victoria, Jellyfish                                               |
| <b>Host Species:</b> | Mouse                                                                                                                                                                                                                                                                                                     |
| <b>Conjugate:</b>    | DyLight™ 488                                                                                                                                                                                                                                                                                              |
| <b>Clonality:</b>    | Monoclonal                                                                                                                                                                                                                                                                                                |
| <b>Clone ID:</b>     | 9F9.F9                                                                                                                                                                                                                                                                                                    |
| <b>Format:</b>       | IgG1                                                                                                                                                                                                                                                                                                      |
| <b>F/P Ratio:</b>    | 3.2                                                                                                                                                                                                                                                                                                       |

**Target Details**

|                        |                     |
|------------------------|---------------------|
| <b>Reactivity:</b>     | GFP, eGFP, rGFP     |
| <b>Immunogen Type:</b> | Recombinant Protein |

|                            |                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Immunogen:</b>          | BALB/c mice were immunized with a Green Fluorescent Protein (GFP) fusion protein corresponding to the full length amino acid sequence (246 aa) derived from the jellyfish <i>Aequorea victoria</i> . A hybridoma was produced by the fusion of BALB/c mouse splenocytes and myeloma cells using conventional hybridoma technology.                                                                        |
| <b>Purity/Specificity:</b> | GFP Dylight™ 488 Conjugated Antibody was prepared from tissue culture supernatant by Protein A affinity chromatography. Assay by Immunoelectrophoresis resulted in a single precipitin arc against anti-Mouse Serum. Reactivity is observed against recombinant Green Fluorescent Protein (000-001-215, recombinant GFP from <i>Aequorea victoria</i> ) by Western blot. No reaction is seen against RFP. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - P42212</a></li></ul>                                                                                                                                                                                                                                                                                                                      |

## Application Details

|                                |                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b>    | ELISA, WB                                                                                                                                                                                                                                                                                                                                    |
| <b>Suggested Applications:</b> | IF (Based on references)                                                                                                                                                                                                                                                                                                                     |
| <b>Application Note:</b>       | Anti-GFP Dylight™ 488 Conjugated has been tested by ELISA and western blot and is designed for immunofluorescence microscopy, fluorescence based plate assays (FLISA) and fluorescent western blotting. The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation. |
| <b>Assay Dilutions:</b>        | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                                                                              |
| <b>FLISA:</b>                  | >1:20,000                                                                                                                                                                                                                                                                                                                                    |
| <b>IF:</b>                     | >1:5,000                                                                                                                                                                                                                                                                                                                                     |
| <b>WB:</b>                     | 1:10,000 - 1:25,000                                                                                                                                                                                                                                                                                                                          |

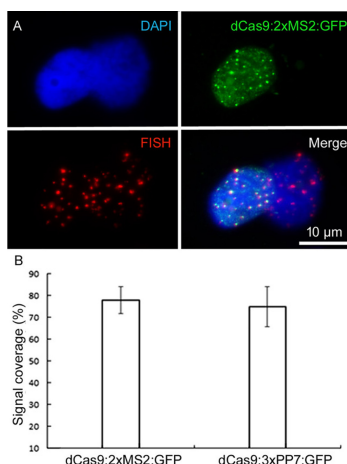
## Formulation

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| <b>Physical State:</b>        | Lyophilized                                                            |
| <b>Concentration:</b>         | 1.0 mg/mL by UV absorbance at 280 nm                                   |
| <b>Buffer:</b>                | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2             |
| <b>Preservative:</b>          | 0.01% (w/v) Sodium Azide                                               |
| <b>Stabilizer:</b>            | 10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free |
| <b>Reconstitution Volume:</b> | 100 µL                                                                 |
| <b>Reconstitution Buffer:</b> | Restore with deionized water (or equivalent)                           |

## Shipping & Handling

|                            |                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Shipping Condition:</b> | Ambient                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage Condition:</b>  | Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. 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. |
| <b>Expiration:</b>         | Expiration date is one (1) year from date of receipt.                                                                                                                                                                                                                                                                                           |

## Images



### Fluorescence in situ Hybridization (FISH)

Confirming the target specificity of aptamer-based CRISPR imaging. (A) Immunofluorescence staining against dCas9:2xMS2:GFP combined with telomere-specific FISH. Nuclei are counterstained with DAPI (in blue). (B) Comparing the efficiency of both types of aptamer-based CRISPR imaging with FISH. Telomeric signals based on 20 isolated nuclei per each construct after ImmunoFISH. dCas9:2xMS2:GFP and dCas9:3xPP7:GFP recognized 78% and 75% of telomere signals identified by FISH, respectively ( $p < 0.05$ ). The intensity of CRISPR signals was increased by in direct immunostaining using a 1:2,500 diluted DyLight 488-labeled GFP mouse monoclonal antibody (p/n 200-341-215). Fig 4.

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### Immunofluorescence Microscopy

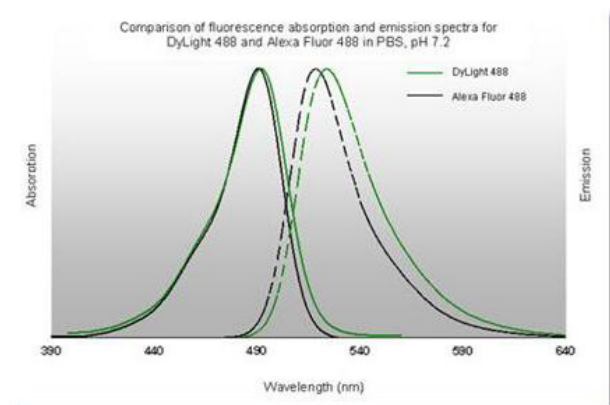
Multi-color Immunofluorescence Microscopy using DyLight™ dyes. Tissue: human breast carcinoma. Fixation: 0.5% PFA. Antigen retrieval: not required. Primary antibody: Anti-Histone and Anti-Tubulin antibody at 10 µg/mL for 1 h at RT. Secondary antibody: DyLight™ 488 conjugate and DyLight™ 549 conjugate mouse secondary antibody at 1:10,000 for 45 min at RT. Localization: Histone is nuclear and Tubulin is cytoplasmic. Staining: Anti-Histone detection using a DyLight™ 488 conjugate (green) fluorescent signal and Anti-Tubulin was detected using a DyLight™ 549 conjugate (red) fluorescent signal. Nuclei were counter-stained using DAPI (blue).



| Emission      | Color                                                                             | DyLight™ Dye | Ex/Em (nm) | $\epsilon$ (M <sup>-1</sup> cm <sup>-1</sup> ) | Similar Dyes                       |
|---------------|-----------------------------------------------------------------------------------|--------------|------------|------------------------------------------------|------------------------------------|
| Blue          |  | 405          | 400/420    | 30,000                                         | Alexa™ 405, Cascade Blue           |
| Green         |  | 488          | 493/518    | 70,000                                         | Alexa™ 488, Cy2®, FITC             |
| Yellow        |  | 549          | 550/568    | 150,000                                        | Alexa™ 546, Alexa 555, Cy3®, TRITC |
| Red           |  | 649          | 646/674    | 250,000                                        | Alexa™ 647, Cy5®                   |
| Near Infrared |  | 680          | 682/715    | 140,000                                        | Alexa™ 680, Cy5.5®, IRDye™ 700     |
| Infrared      |  | 800          | 770/794    | 270,000                                        | IRDye™ 800                         |

### Diagram

Properties of DyLight™ Fluorescent Dyes. The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation.

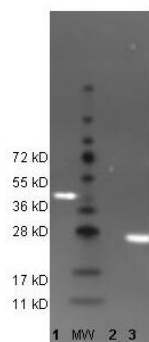


### Diagram

Comparison of fluorescence absorption and emission spectra for DyLight™ 488 and Alexa Fluor 488 in PBS, pH7.2. The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation.

### Western Blot

Western Blot of DyLight™ 488 conjugated monoclonal anti-GFP antibody to detect GFP control proteins. Lane 1: His-Sumo-GFP. Lane: Molecular Weight. Lane 2: Beta-Galactosidase (negative control). Lane 3: recombinant GFP control protein (000-001-215). Load: 35 µg per lane. Primary antibody: none. Secondary antibody: DyLight™ 488 conjugated monoclonal anti-GFP (200-341-215) secondary antibody at 1:5,000. Block: MB-070 for 2 hr at RT. Predicted/Observed size: 27kDa/54kDa, 27kDa for rGFP/~45kDa His-Sumo-GFP. Other band(s): none.



## References

- Khosravi S et al. Application of Aptamers Improves CRISPR-Based Live Imaging of Plant Telomeres. *Front Plant Sci.* (2020)

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.