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Datasheet for 200-341-215

GFP Antibody Dylight™ 488 Conjugated

Overview

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

Product Details

Background:	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.
Synonyms:	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
Host Species:	Mouse
Conjugate:	DyLight™ 488
Clonality:	Monoclonal
Clone ID:	9F9.F9
Format:	IgG1
F/P Ratio:	3.2

Target Details

Reactivity:	GFP, eGFP, rGFP
Immunogen Type:	Recombinant Protein

Immunogen:	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 Aequorea victoria. A hybridoma was produced by the fusion of BALB/c mouse splenocytes and myeloma cells using conventional hybridoma technology.
Purity/Specificity:	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 Aequorea victoria) by Western blot. No reaction is seen against RFP.
Relevant Links:	• UniProtKB - P42212

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IF (Based on references)
Application Note:	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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
FLISA:	>1:20,000
IF:	>1:5,000
WB:	1:10,000 - 1:25,000

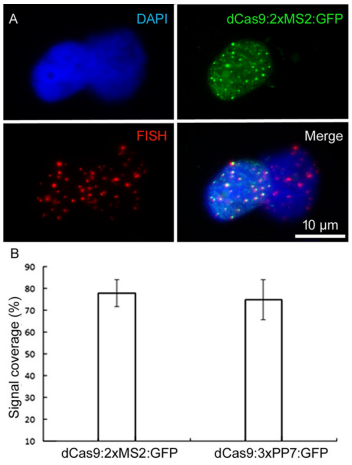
Formulation

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

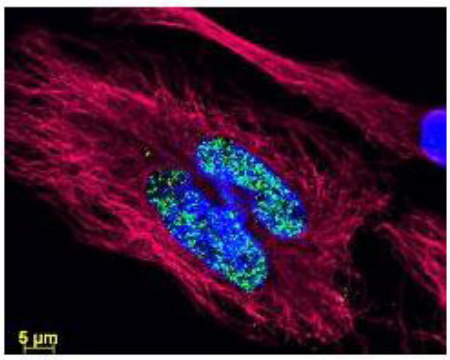
Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	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.
Expiration:	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.
PMID: 32973827



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)	ε (M^{-1} cm^{-1})	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.

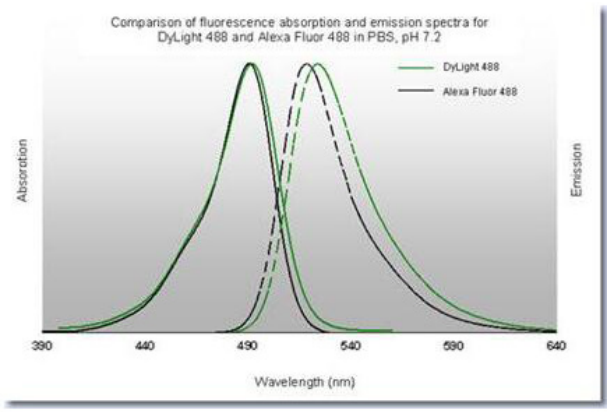
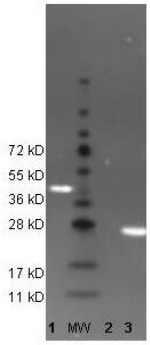


Diagram
Comparison of fluorescence absorbtion and emission spectra for DyLight™ 488 and Alexa Fluor 488 in PBS, pH7.2. The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation.



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)

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