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Datasheet for 610-143-003

Mouse IgG Fc Antibody DyLight™ 649 Conjugated

Overview

Description:	Goat Anti-Mouse IgG Fc Antibody DyLight™ 649 Conjugated - 610-143-003
Item No.:	610-143-003
Size:	100 µg
Applications:	WB
Reactivity:	Mouse
Host Species:	Goat

Product Details

Background:	Anti-Mouse IgG F(c) generated in goat is a proteolytic fragment of immunoglobulin G (IgG) obtained by limited digestion with the enzyme papain under controlled conditions of temperature, time and pH. Receptors bind the Fc portion of mouse IgG and often this fragment is removed from immunoglobulins to minimize receptor binding and lower background reactivity.
Synonyms:	Goat Anti Mouse IgG F(c) Antibody DyLight™ 649 Conjugated, Goat Anti-Mouse IgG Fc Antibody DyLight™ 649 Conjugated, Goat Anti Mouse IgG Fc Fragment Antibody DyLight™ 649 Conjugated
Host Species:	Goat
Specificity:	IgG Fc
Conjugate:	DyLight™ 649
Clonality:	Polyclonal
Format:	IgG
F/P Ratio:	3.1

Target Details

Reactivity:	Mouse
Immunogen:	Mouse IgG F(c) fragment

Purity/Specificity:	This product was prepared from monospecific antiserum by immunoaffinity chromatography using Mouse IgG coupled to agarose beads followed by solid phase adsorption(s) to remove any unwanted reactivities. Assay by immunoelectrophoresis resulted in a single precipitin arc against anti-Goat Serum, Mouse IgG, Mouse IgG F(c) and Mouse Serum. No reaction was observed against Mouse IgG F(ab) This antibody will react with heavy chains of Mouse IgG. Minimal reactivity is expected against other Mouse immunoglobulins.

Application Details

Suggested Applications:	WB (Based on references)
Application Note:	The emission spectra for this DyLight™ conjugate match the principle output wavelengths of most common fluorescence instrumentation. This product is designed for immunofluorescence microscopy, fluorescence based plate assays (FLISA) and fluorescent western blotting. This product is also suitable for multiplex analysis, including multicolor imaging, utilizing various commercial platforms.
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

Formulation

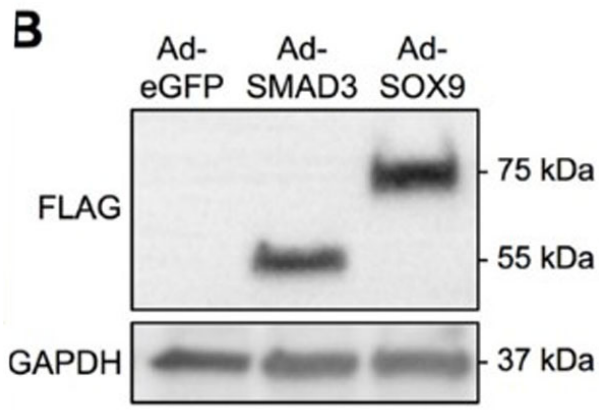
Physical State:	Lyophilized
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free
Reconstitution Volume:	100 µL
Reconstitution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

Shipping & Handling

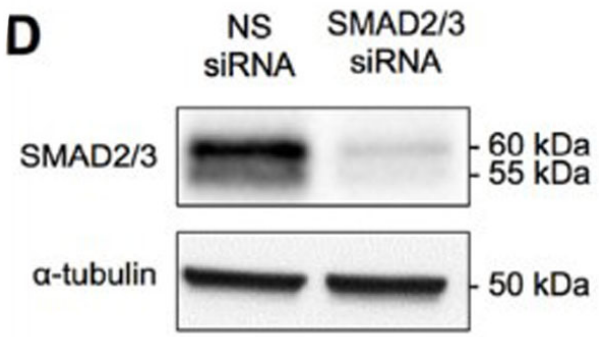
Shipping Condition:	Ambient

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.

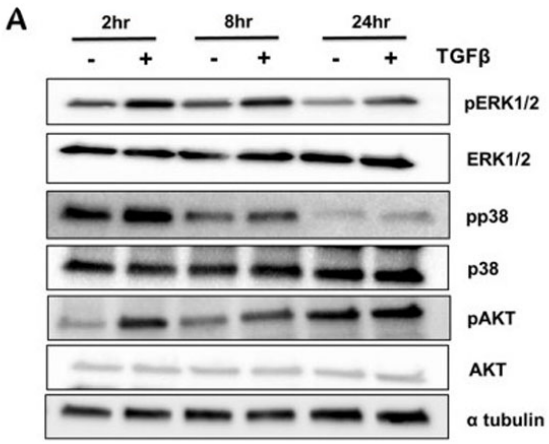
Images



Western Blot
SMAD3 and SOX9 adenoviral vectors infect cells, induce expression of FLAG-tagged proteins, and up-regulate SMAD3 and SOX9 function respectively Bovine chondrocytes that were infected with either Ad-eGFP, Ad-SMAD3, or Ad-SOX9. Western blots of extracts from bovine chondrocytes showed expression of FLAG-tagged proteins at approximately 52 kDa and 75 kDa, corresponding to SMAD3 and SOX9 molecular weights respectively (n = 4) (B). Primary antibodies: anti-GAPDH antibody (1:1000) or anti-FLAG antibody (1:500), with secondary antibodies: HRP-conjugated anti-rabbit (1:2000) and anti-mouse [1:2500, p/n 610-143-003] Figure 2. PMID: 27746378.

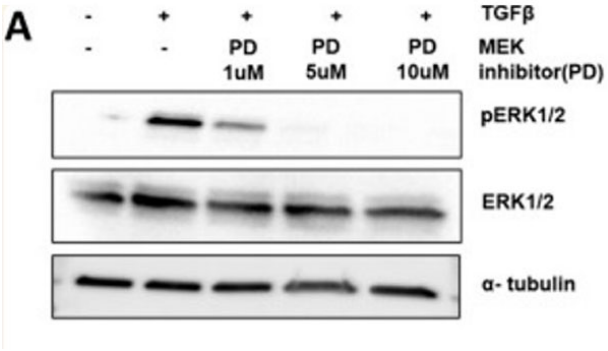


Western Blot
Knock-down of Sox9 attenuates TGF-β-mediated regulation of Papss2 ATDC5 cells were transfected with Sox9 siRNA, Smad2/3 siRNA, or control non-specific (NS) siRNA. Western blots showed Smad2/3 protein levels were reduced in the presence of Smad2/3 siRNA, α-Tubulin was used as a loading control (n = 6) (D). Primary antibodies: anti-SMAD2/3 antibody (1:2000) or anti-α-Tubulin antibody [1:2500, p/n 200-301-880], with secondary antibodies anti-mouse [1:2500, p/n 610-143-003]. Figure 4. PMID: 27746378.



Western Blot

TGF-β signaling regulates noncanonical pathways in the sclerotome. Sclerotome was treated with vehicle control or TGFβ1 for 2, 8 or 24 h. Immunoblot was used to determine activity of ERK, p38 and AKT. α tubulin was used as a general loading control. Immunoblots were cropped for clarity. Primary antibodies: pERK1/2 , ERK1/2, pp38, p38, pAKT, AKT, and Alpha tubulin [p/n 200-301-880] with secondary antibodies: anti-Rabbit-HRP and anti-mouse DyLight™649 [p/n 610-143-003]. Figure 3. PMID: 33288795.



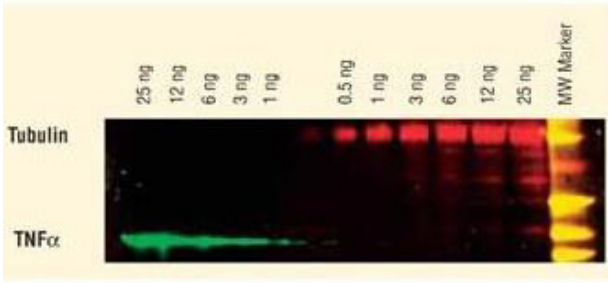
Western Blot

ERK is required for fibrous tissue marker regulation but not required to inhibit chondrogenesis. (A) Sclerotome was treated with a MEK inhibitor PD184352, PD, to inhibit ERK activity, for 24 h and then cells were treated with TGFβ1 for 8 h. Immunoblot was used to determine relative levels of pERK1/2, ERK1/2, and α-tubulin. Primary antibodies: pERK1/2 , ERK1/2, and Alpha tubulin [p/n 200-301-880] with secondary antibodies: anti-Rabbit-HRP and anti-mouse DyLight™649 [p/n 610-143-003]. Figure 5. PMID: 33288795.

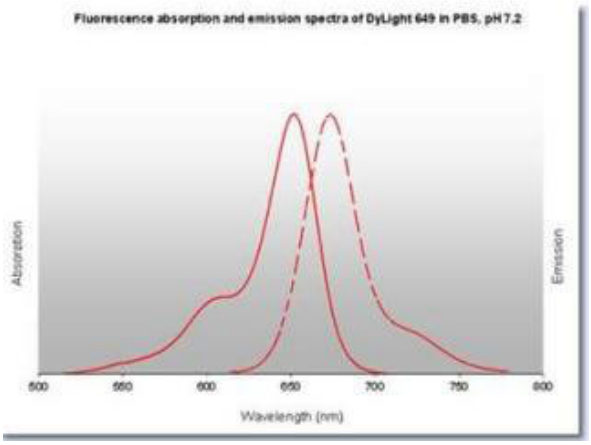
Diagram

Properties of DyLight™ Conjugates.

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



Western Blot
DyLight™ dyes can be used for two-color Western Blot detection with low background and high signal. Anti-tubulin was detected using a DyLight™ 549 conjugate. Anti-TNFa was detected using a DyLight™ 649 conjugate. The image was captured using the Typhoon™ 9410 Imaging System.



Diagram

References

- Clayton SW et al. Canonical and noncanonical TGF-β signaling regulate fibrous tissue differentiation in the axial skeleton. *Sci Rep.* (2020)
- Chavez et al. SOX9 protein is stabilized by TGF-β and regulates PAPSS2 mRNA expression in chondrocytes. *Osteoarthritis Cartilage* (2017)

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