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Datasheet for PA00-45

Protein A DyLight™ 800 Conjugated

Overview

Description:	Protein A DyLight™ 800 Conjugated - PA00-45
Item No.:	PA00-45
Size:	100 µg
Applications:	WB
Origin:	Staphylococcus aureus

Product Details

Background:	Protein A is a cell wall protein originating from the bacterium Staphylococcus aureus. Protein A binds to immunoglobulins through interaction with the IgG heavy chain within the Fc region. Affinity to Fc may vary depending on IgG species origins or subclasses. Protein A is predicted 42kDa based on sedimentation data and observed to run ~55-56kDa on SDS-Page. Protein A is often coupled to solid matrixes such as Sepharose™, magnetic particles or latex for IgG purification from ascites, serum or hybridoma culture media. Protein A is often coupled with reporter molecules such as a fluorescent dye, DyLight™, enzymes, biotin, or other detection agents.
Synonyms:	Protein A DyLight™ 800 Conjugated, ProA, Staphylococcus A protein
Species of Origin:	Staphylococcus aureus
Conjugate:	DyLight™ 800
F/P Ratio:	2.0
Specific Activity:	16.7

Target Details

Purity/Specificity:	This product is chromatographically pure Protein A and shows predominantly a single band by SDS-PAGE. Greater than 95% of the A280 material binds to Human IgG.

Application Details

Suggested Applications:	WB (Based on references)

Application Note:	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. 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

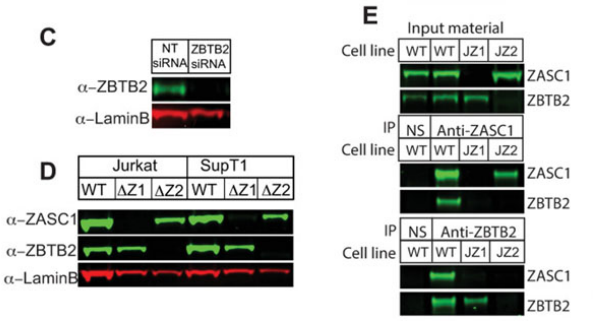
Formulation

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



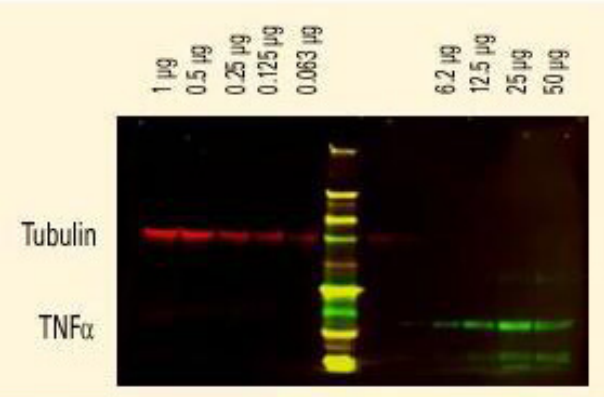
Western Blot

ZASC1 and ZBTB2 regulate HIV-1 gene expression. A sample of cells were harvested for total protein (see C) at this time. 48 hours post infection HIV-1 transcription was assayed for by measuring firefly luciferase and cell viability was monitored by the ATP assay CellTiter-glo (Promega). The data shown are the average mean values obtained in an experiment performed with quadruplicate samples and are representative of three independent experiments. (C and D) Western blots demonstrating loss of ZASC1 or ZBTB2 protein accumulation in (C) SUPT1 cells transfected with siRNAs targeting ZBTB2 or non-targeting (NT) siRNA or (D) ZASC1 and ZBTB2 knockout cells generated by CRISPR/CAS9 in SUPT1 and Jurkat T cell lines. (E) Co-immunoprecipitation assays of endogenous proteins. WT Jurkat, ZASC1 or ZBTB2 knockout cells (1X107) were lysed and incubated with ZASC1, ZBTB2 or non-specific (NS) rabbit IgG. Co-immunoprecipitating complexes were detected by western blotting. Fig 3. PMID: 33635925.

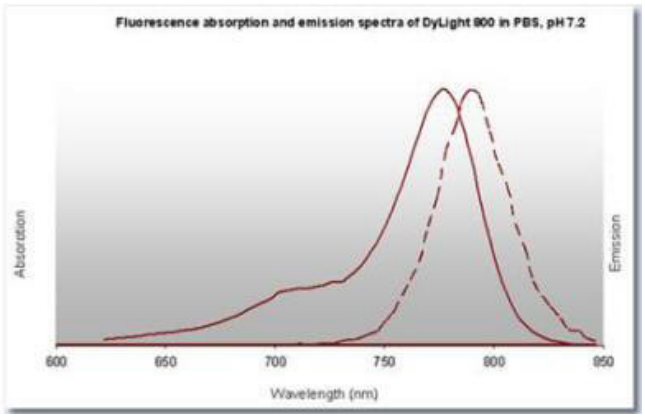
Emission	Color	DyLight™ Dye	Ex/Em (nm)	ε (M^{-1} cm^{-1})	Similar Dyes
Blue		**405**	**400/420**	**30,000**	**Alexa™ 405, Cascade Blue**
Green		488	493/518	70,000	Alexa™ 488, Cy2®, FITC
Yellow		549	550/568	150,000	Alexa™ 546, Alexa 555, Cy3®,TRITC
Red		649	646/674	250,000	Alexa™ 647, Cy5®
Near Infrared		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.



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™ 680 conjugate. Anti-TNFa was detected using a DyLight™ 800 conjugate. The image was captured using the Odyssey® Infrared Imaging System developed by LI-COR.



Diagram

References

- Bruce JW et al. ZBTB2 represses HIV-1 transcription and is regulated by HIV-1 Vpr and cellular DNA damage responses. *PLoS Pathog.* (2021)

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