abcam

Product datasheet

FITC Conjugation Kit - Lightning-Link® ab102884

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Overview

Product name

FITC Conjugation Kit - Lightning-Link®

Product overview

FITC Conjugation Kit / FITC Labeling Kit ab102884 uses a simple and quick process for FITC labeling / conjugation of antibodies. It can also be used to conjugate other proteins or peptides. Learn about our **antibody labeling kits and their advantages**.

We recommend FITC Conjugation Kit **ab188285** as an alternative this kit using a faster, newer protocol.

To conjugate an antibody to FITC using this kit:
- add modifier to antibody and incubate for 3 hrs
- add quencher and incubate for 30 mins
The FITC conjugated antibody can be used immediately in WB, ELISA, IHC etc. No further purification is required and 100% of the antibody is recovered for use.

Learn about buffer compatibility below; for incompatible buffers and low antibody concentrations, use our rapid **antibody purification and concentration kits**. Use the **FAQ** to learn more about the technology, or about conjugating other proteins and peptides to FITC.

Custom size conjugation kits up to 100 mg are available on demand. Please contact us to discuss your requirements.

Notes

This product is manufactured by Expedeon, an Abcam company, and was previously called Lightning-Link® Fluorescein Labeling Kit. 707-0005 is the same as the 100 µg size. 707-0010 is the same as the 3 x 100 ug size. 707-0030 is the same as the 3 x 10 ug size. 707-0015 is the same as the 1 mg size.

Amount and volume of antibody for conjugation to FITC

Kit size	*Recommended amount of antibody*[1]	*Maximum amount of antibody*	*Maximum antibody volume*[2]
3 x 10 µg	3 x 10 µg	3 x 20 µg	3 x 10 µL

100 µg	1 x 100 µg	1 x 200 µg	1 x 100 µL
3 x 100 µg	3 x 100 µg	3 x 200 µg	3 x 100 µL
1 mg	1 x 1 mg	1 x 2 mg	1 x 1 mL

[1] Using the maximum amount of antibody may result in less labelling per antibody.

[2] Ideal antibody concentration is 1mg/ml. 0.5 - 1 mg/ml can be used if the maximum antibody volume is not exceeded. Antibodies > 2 mg/ml or < 0.5 mg/ml should be diluted /concentrated.

Buffer Requirements for Conjugation

Buffer should be pH 6.5-8.5.

Compatible buffer constituents

If a concentration is shown, then the constituent should be no more than the concentration shown. If several constituents are close to the limit of acceptable concentration, then this can inhibit conjugation.

50mM / 0.6% Tris[1]	0.1% BSA	50% glycerol
0.1% sodium azide	PBS	Potassium phosphate
Sodium chloride	HEPES	Sucrose
Sodium citrate	EDTA	Trehalose

[1] Tris buffered saline is almost always ≤ 50 mM / 0.6%

Incompatible buffer constituents

Thiomerosal	Proclin	Glycine
Arginine	Glutathione	DTT

If a constituent of the buffer containing your antibody or protein is not listed above, please check the **FAQ** or **contact us**.

Only purified antibodies are suitable for use, ie. where other proteins, peptides, or amino acids are not present: antibodies in ascites fluid, serum or hybridoma culture.

Storing and handling conjugation kits

Lyophilized Lightning-Link® components are hygroscopic.

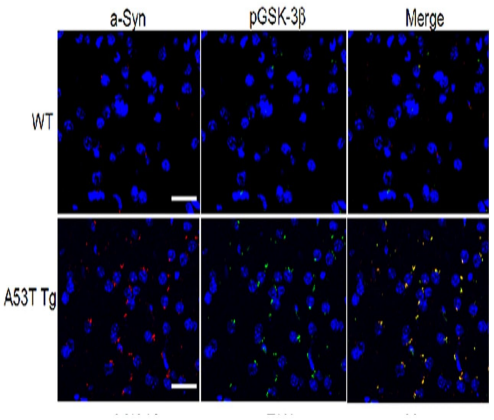
Kits are intentionally shipped at ambient temperature with silica gel to avoid exposure to moisture. Upon receipt, store the kit frozen and protect from moisture. Before opening the outer container, allow the lyophilized components to reach room temperature to minimize condensation.

Properties

Storage instructions	Store at -20°C. Please refer to protocols.

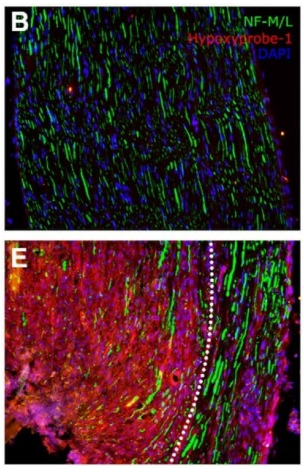
Components	1 mg	100 µg	3 x 10 µg	3 x 100 µg
ab274132 - FITC mix	1 x 1mg	1 x 100µg	3 x 10µg	3 x 100µg
Modifier reagent	1 x 200µl	1 x 200µl	1 x 200µl	1 x 200µl
ab274133 - Quencher reagent	1 x 200µl	1 x 200µl	1 x 200µl	1 x 200µl

Images



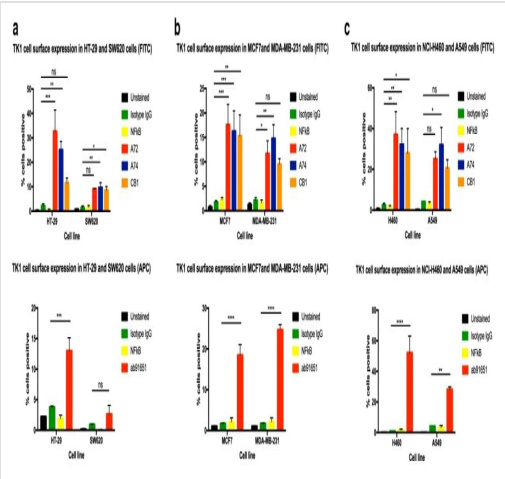
Immunohistochemistry (PFA perfusion fixed frozen sections) - FITC Conjugation Kit - Lightning-Link® (ab102884)

Wills, Jonathan, et al used FITC Conjugation Kit - Lightning-Link® (ab102884) as part of examining the aggregation and co-localization of α-Syn with pGSK-3β and p-Tau in the striatum of A53T α-Syn mutant mice (A53T Tg) and wild-type mice (WT). They used the kit to conjugate FITC to Anti-p-GSK-3β (pY216) antibody for use in immunohistochemistry (PFA perfusion fixed frozen sections).
Right panels constitute merged image of left panels. Sections of striatum of A53T Tg and age-matched WT mice were stained with anti-α-Syn antibody conjugated to Texas Red (red) and anti-p-GSK3β conjugated to FITC (green). Nuclei were stained with DAPI (blue).



Immunocytochemistry - FITC Conjugation Kit-Lightning-Link

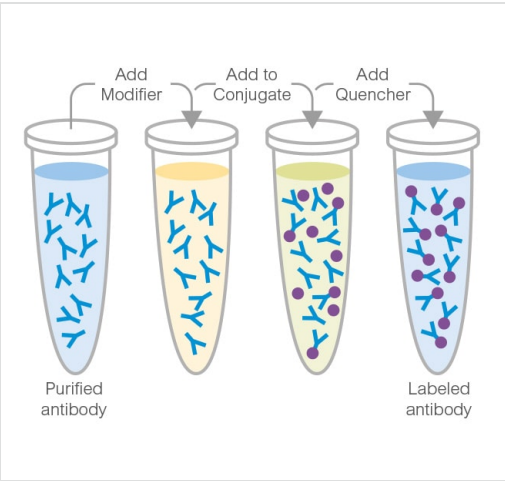
Lim, Tony KY, et al used FITC Conjugation Kit - Lightning-Link® (ab102884) as part of examining traumatic nerve injury. They used the kit to conjugate FITC to mouse anti-neurofilament 160/200 for use in immunohistochemistry.B, Contralateral nerves were stained for hypoxyprobe-1, DAPI, and neurofilament 160/200 (NF-M/L, axons). E, Ipsilateral nerves were subjected to the same staining. The area in proximity to the injury site is shown. Hypoxia, as shown by hypoxyprobe-1 staining, is observed in a region close to the injury site, in which axons, macrophages, and Schwann cells are all found to be hypoxic. This hypoxic region, in which nerve fibers were ligated, is delineated by the white dotted line. Areas outside of the dotted regions containing nonligated nerve fibers still have more hypoxyprobe deposition than contralateral nerves.



Flow Cytometry - FITC Conjugation Kit- Lightning-Link

Image from Weagel, Evita G., et al., Cancer cell international 18.1 (2018): 1-14. Reproduced under the Creative Commons license https://creativecommons.org/licenses/by/4.0/

Weagel, Evita G., et al used FITC Conjugation Kit - Lightning-Link® (ab102884) as part of examining thymidine kinase 1 in lung, breast, and colorectal malignancies. They used the kit to conjugate FITC to three custom and a commercial anti-human thymidine Kinase 1 (TK1) antibodies for use in flow cytometry.
Membrane TK1 expression in of colon, breast, and lung cancer cell lines. Flow cytometry analysis of cell lines treated with anti-TK1 antibodies. a Quantification of TK1 expression on the cell membrane of HT-29 and SW620 cell lines stained with FITC or APC-conjugated anti-TK1 antibodies. b Quantification of TK1 expression on the cell membrane of MCF7 and MDA-MB-231 cell lines. The top bar graph shows MCF7 and MDA-MB-231 cell lines stained with FITC or APC-conjugated anti-TK1 antibodies. c Quantification of TK1 expression on the cell membrane of NCI-H460 and A549 cell lines stained with FITC or APC-conjugated anti-TK1 antibodies. Statistical analysis was performed by comparing the mouse isotype control fluorescent levels to those of A72, A74, CB1, or **ab91651**. *P ≤ 0.05; **P ≤ 0.005; ***P ≤ 0.001; ns = P > 0.05



Conjugation - FITC Conjugation Kit (ab102884)

This illustration demonstrates a general procedure and will slightly vary dependent on the conjugate used.

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