Version 1b Last updated 12 August 2026

ab269854 176Yb Metal Conjugation Kit - Lightning-Link®

For the Conjugation of Antibodies or Proteins to 176Yb.

This product is for research use only and is not intended for diagnostic use.

Copyright © 2026 Abcam. All rights reserved

Table of Contents

1. Overview 1
2. Materials Supplied and Storage 2
3. Materials Required, Not Supplied 2
4. General guidelines, precautions, and troubleshooting 3
5. Reagent Preparation 4
6. Sample Preparation 4
7. Assay Procedure 5
8. Typical Data **Error! Bookmark not defined.**
9. Notes 6

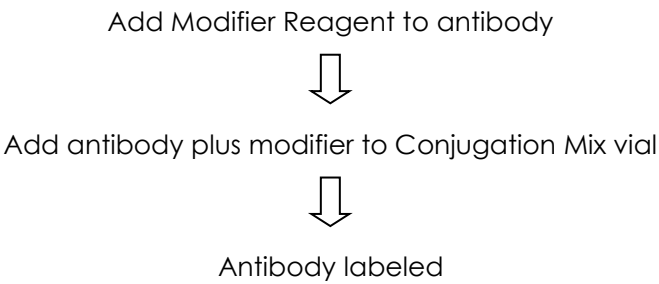
Copyright © 2026 Abcam. All rights reserved

1. Overview

176Yb Metal Conjugation Kit - Lightning-Link® (ab269854) provides an easy-to-use, one step procedure that allows researchers to label proteins, peptides and other biomolecules containing primary amines with 176Yb with only 30 seconds hands-on time; furthermore conjugates are ready to use in less than twenty minutes.

The antibody to be labeled should be purified, in an appropriate buffer for conjugation and at a suitable concentration, as described in section 6. If not, consider using our antibody purification and concentration kits.

http://www.abcam.com/kits/antibody-purification-and-concentration-kits



2. Materials Supplied and Storage

Store kit at -20°C in the dark immediately on receipt and check below for storage for individual components.

Avoid repeated freeze-thaws of reagents.

Item	100 µg	Storage temperature (before prep)	Storage temperature (after prep)
176Yb Mix	1 vial	-20°C	-20°C
Modifier reagent	1 vial	-20°C	4°C or -20°C
Quencher reagent	1 vial	-20°C	4°C or -20°C

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.

3. Materials Required, Not Supplied

These materials are not included in the kit, but will be required to successfully perform this assay:

- Microfuge Tubes (0.5 or 1.5 mL)
- Microfuge
- Adjustable pipette or multiple-channel pipette

4. General guidelines, precautions, and troubleshooting

Please observe safe laboratory practice and consult the safety datasheet.

For general guidelines, precautions, limitations on the use of our assay kits and general assay troubleshooting tips, particularly for first time users, please consult our guide:
www.abcam.com/assaykitguidelines

For typical data produced using the assay, please see the assay kit datasheet on our website.

5. Reagent Preparation

Prepare fresh reagents immediately prior to use.

6. Sample Preparation

Pre-Conjugation Considerations:

6.1 The purified antibody to be labeled should ideally be in 10 – 50 mM amine-free buffer (e.g. MES, MOPS, HEPES, PBS), pH range 6.5 to 8.5. Borate buffer is also suitable.

6.2 Common non-buffering salts (e.g. sodium chloride), chelating agents (e.g. EDTA), and sugars have no effect on conjugation efficiency. Azide (< 0.1%), BSA (<0.1%) have little or no effect. Glycerol <50%, Tris <50 mM and gelatin <0.1% have no effect.

6.3 Avoid buffer components that are nucleophilic, as these may react with Conjugation Kit chemicals. Compounds containing primary amines (e.g. amino acids, ethanolamine and Tris) and thiols (e.g. mercaptoethanol or DTT) fall within this class. Thimerosal (thiomersal, Merthiolate) should also be avoided.

7. Assay Procedure

– Equilibrate all materials and prepared reagents to room temperature just prior to use and gently agitate.

7.1 Allow all the reagent to warm to room temperature.

7.2 Dilute your antibody down to 1 mg/ml (see table for buffer compatibility) and add 1 µL of 176Yb Modifier reagent for each 10 µL of antibody to be conjugated. 110 µL of the antibody mix is required for 100 µg vial.

7.3 Remove the screw cap from the vial of Lightning-Link® vial and pipette 110 µL of antibody mixture directly onto the lyophilized material. Resuspend gently by withdrawing and re-dispensing the liquid until the solution is clear.

7.4 Place the cap back on the vial and allow conjugation to take place at room temperature (20 - 25°C) for 1 hour.
At the end of the conjugation time, add 10 µL of 176Yb Quencher Reagent. The conjugates are ready for use after 15 minutes. The conjugates do not require purification.

Δ Note: Storage at 4°C is recommended for any conjugate. For longer storage the conjugate can be stored at -20°C with a cryoprotectant such as 50% glycerol.

8. Notes

Technical Support

Copyright © 2026 Abcam. All Rights Reserved. The Abcam logo is a registered trademark. All information / detail is correct at time of going to print.

For all technical or commercial enquiries please go to:
https://www.abcam.com/en-us/contact-us
https://www.abcam.cn/contact-us (China)
https://www.abcam.co.jp/contact-us (Japan)

Copyright © 2026 Abcam. All rights reserved