

## MagicLink™ PE Antibody Conjugation Kits

### Components

Components	Product size								Storage condition
	BP-50093	BP-50094	BP-50095	BP-50096	BP-50097	BP-50098	BP-50099		
	3 x 10 µg	1 x 50 µg	3 x 50 µg	1 x 100 µg	3 x 100 µg	1 x 500 µg	3 x 500 µg		
A	MAGIC NHS	3 x 90 µg	1 x 90 µg	3 x 90 µg	1 x 90 µg	3 x 90 µg	1 x 90 µg	3 x 90 µg	-20 °C
B	LINK activated PE	3 vials	1 vial	3 vials	1 vial	3 vials	1 vial	3 vials	-20 °C
C	Reaction buffer	3 x 1 ml	1 x 1 ml	3 x 1 ml	1 x 1 ml	3 x 1 ml	1 x 1 ml	3 x 1 ml	4-8 °C
D	Storage buffer	3 x 1 ml	1 x 1 ml	3 x 1 ml	1 x 1 ml	3 x 1 ml	1 x 1 ml	3 x 1 ml	4-8 °C

Note:

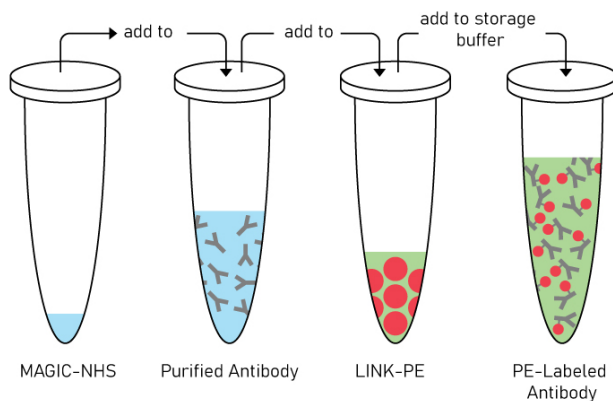
- The kits are shipped with blue ice.
- When stored as directed, each reagent is stable until the expiration date shown on the bottle label.

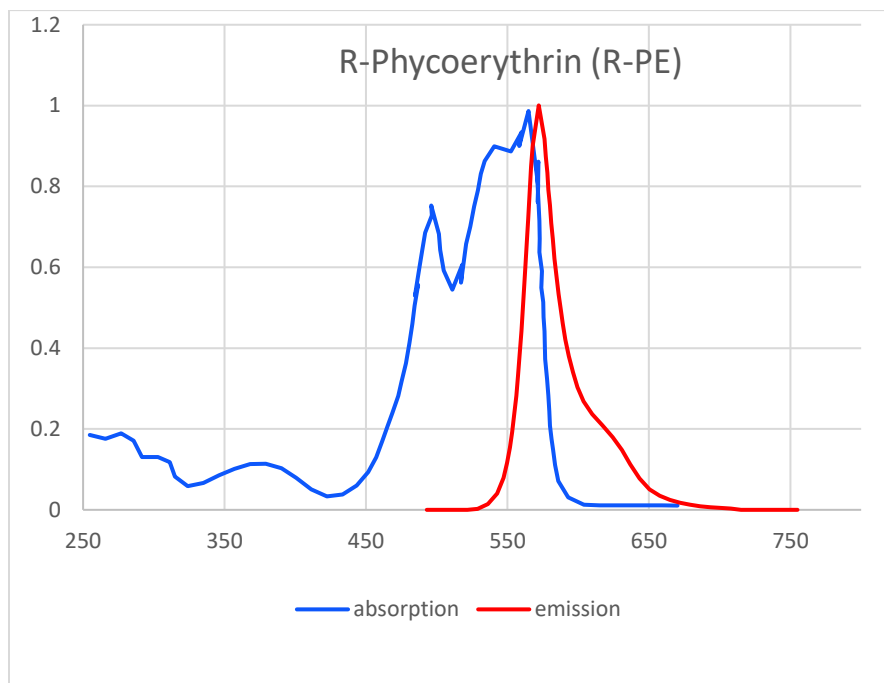
### Overview

MagicLink™ R-Phycoerythrin (PE) Antibody Conjugation Kits are the 3rd generation conjugation technology which can be used to conjugate PE to protein, antibody, amine modified oligo, etc. The kits feature the most stable linkage between PE and antibody on the market. The instant and efficient reaction yields 95 to 100% PE antibody conjugates.

These kits are specifically optimized to conjugate antibodies at a scale of 10, 50, 100, and 500 µg. The kits' format is based on instant reaction between functional groups MAGIC and LINK. By following the easy protocol provided in the kits, the end users can activate their antibody with MAGIC NHS to get MAGIC-antibody. It is then instantly used to react with LINK activated PE (provided in the kits) to achieve PE antibody conjugates.

LINK activated PE is formulated to achieve long-term stability in the manufacturing process and in storage post production.





## At a Glance

### Protocol summary

1. Prepare antibody in reaction buffer.
2. Prepare and transfer the required volume of MAGIC NHS solution to antibody solution.
3. Incubate at room temperature for 1 hour.
4. Transfer all of the MAGIC-antibody solution with LINK activated R-phycoerythrin vial (component B).
5. Incubate at room temperature for 1 hour.
6. Add storage buffer to the conjugate for long term storage.

## Protocol

This protocol is optimized for 10 µg, 50 µg, 100 µg, and 500 µg antibody kits conjugations.

## Preparation of antibody working solution

Note:

- The antibody should be purified and free of carrier proteins. Impure antibody or antibody stabilized with bovine serum albumin (BSA) or gelatin will affect conjugation reaction and should be removed.
- The antibody should be in reaction buffer, or 1X phosphate buffered saline (PBS), pH 7.2 – 7.5; if the antibody is dissolved in glycine buffer or tris buffer, it must be dialyzed against 1X PBS.
- Conjugation efficiency is significantly reduced if the antibody concentration is less than 1 mg/ml.

## Activation of Antibody

1. Purified antibody should be in reaction buffer, or 1X PBS at 1 mg/ml.
2. Add 90 µl of reaction buffer to MAGIC NHS vial (component A) to dissolve the compound.
3. Transfer the required amount of MAGIC NHS solution to the antibody solution according to the chart below:

Kit label	10 µg kit	50 µg kit	100 µg kit	500 µg kit
Antibody amount	10 µg	50 µg	100 µg	500 µg
MAGIC NHS volume	2 µl	9 µl	12 µl	59 µl

4. Mix them well by repeatedly pipetting for a few times or vortex the vial for a few seconds. Keep the MAGIC antibody reaction mixture at room temperature for 1 hour. The mixture can be rotated or shaken for a longer time if needed.

Note: Magic activated antibody/protein should be used right away.

## MAGICLINK PE–Antibody Conjugation

1. Transfer all of the MAGIC-antibody solution to a vial of LINK–PE (component B).
2. Mix well by repeatedly pipetting for a few times or vortex the vial for a few seconds, and wrap the vial with aluminum foil.
3. Rotate the mixture at room temperature for 1 hour.

## Storage of Antibody Conjugate

- For any new conjugate, storage at 4°C protected from light is recommended. A preservative may be desirable for long-term storage. Other storage conditions may also be satisfactory. The best conditions for any particular conjugate must be determined by experimentation.
- **Do not freeze.**
- Optional: store the conjugates in storage buffer provided (i.e. 1x PBS, pH7.2, 0.1% gelatin, 0.2% BSA, 0.09% NaN<sub>3</sub>) between 2 °C and 8 °C, and protect from light. Use 1 ml of storage buffer for every 200 µg of conjugate.

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## Troubleshooting

Problem	Possible cause	Solution
Low or no conjugation with MAGIC NHS	Buffer containing primary amine	Buffer exchange the antibody into a non-amine-containing buffer such as the reaction buffer provided, or 1x PBS, using protein concentrator or dialysis tubing/cassette
	MAGIC NHS was hydrolyzed	Use reagent immediately upon reconstitution
	Carrier protein was present in the antibody solution	Remove carrier protein before conjugation by using Protein A, G or A/G resin or an antibody clean-up kit. This will reduce competition for the conjugation reaction