



PolyStain 2-Step Plus Kit –
HRP for AEC Detection
System for Rabbit
Antibody

NB-23-00062-1 (110mL, no chromogen)

NB-23-00062-2 (18ml, with DAB)

NB-23-00062-3 (6ml, with DAB)

**PolyStain 2-Step Plus Kit - HRP Rabbit AEC Detection
System for Immunohistochemistry
Super Sensitive to AEC Chromogen**

**(2-step Polymer-HRP detection system, biotin-free,
Polymer Detection System with Super Sensitivity and Specificity)**

NB-23-00062-1 size : 110mL, no chromogen
 NB-23-00062-2 size : 18ml, with DAB (good for 180 slides)
 NB-23-00062-3 size : 6ml, with DAB (good for 50 slides)

Intended Use:

PolyStain 2-Step Plus Kit - HRP anti Rabbit AEC Detection Kit is the 3rd generation of polymer detection system. It uses Rabbit antibody specific enhancer to help amplify the polymer-enzyme conjugate reaction to achieve super sensitivity and specificity in immunohistochemistry staining. This kit is extremely sensitive to AEC chromogen. It produces consistent immunostaining outcomes on archival tissues and on difficult-to-work antibodies. User may need to further dilute primary antibody due to super sensitivity of PolyStain 2-Step Plus detection system. It is a biotin-free system, therefore, overcomes the nonspecific staining caused by streptavidin/biotin system due to endogenous biotin. Most commonly used specimens for this system are: frozen tissue, paraffin-embedded tissue, freshly prepared lymphocytes and fixed culture cells. It can be used for manual stain or autostainer. Staining conditions need to be optimized by user. DAB chromogen is NOT recommended to use with this system.

PolyStain 2-Step Plus Kit - HRP for AEC Detection System offers a wide choice for primary antibodies, including broad spectrum (for mouse and rabbit primary antibodies), mouse, goat, and rat primary antibodies. Refer to Related Product section for details.

Kit Components:

Catalog No.	Product Name	Reagent 1: Rabbit Antibody Enhancer (RTU)	Reagent 2: Polymer HRP for Rabbit (RTU)	Reagent 3A, 3B, 3C: 3A: AEC Substrate (20x) 3B: AEC Chromogen (20x) 3C: Hydrogen Peroxide (20x)
NB-23-00062-1	PolyStain 2-Step Plus Kit - HRP for AEC Rabbit Bulk	110ml	110ml	Not included
NB-23-00062-2	PolyStain 2-Step Plus Kit - HRP for AEC Rabbit 18ml	18ml	18ml	Reagent 3A: 2ml Reagent 3B: 4ml Reagent 3C: 2ml
NB-23-00062-3	PolyStain 2-Step Plus Kit - HRP for AEC Rabbit 6ml	6ml	6ml	Reagent 3A: 1ml Reagent 3B: 2ml Reagent 3C: 1ml

Recommended Protocol:

1. Fixation: To ensure the quality of the staining and obtain reproducible performance, user needs to supply appropriately fixed tissue and well prepared slides.
2. Tissue need to be adhered to the slide tightly to avoid tissue falling off.

3. Paraffin embedded section must be deparaffinized with xylene and rehydrated with a graded series of ethanol before staining.
4. Cell smear samples should be made as much monolayer as possible to obtain satisfactory results.
5. Investigator needs to optimize dilution and incubation times for primary antibodies.
6. Three control slides will aid the interpretation of the result: positive tissue control, reagent control (slides treated with Isotype control reagent), and negative control.
7. Staining steps: DO NOT let specimen or tissue dry from this point on.

Reagent:

Reagent	Staining Procedure	Incubation Time (Min.)
1. PEROXIDASE BLOCKING REAGENT. Supplied by user	a. Incubate slides in PEROXIDASE BLOCKING REAGENT (Ready-to-use 3% H ₂ O ₂ solution) for 10 minutes. b. Rinse the slide using distilled water.	10
2. HIER PRETREATMENT:	a. Heat Induced Epitope Retrieval (HIER) may be required for primary antibody suggested by vendor. Please check the data sheet of primary antibody b. Wash with PBS 2 min., 3 times.	
3. PRIMARY ANTIBODY Supplied by user	a. Apply 2 drops (100 µL) or enough volume of PRIMARY ANTIBODY to cover the tissue section completely. Incubate in moist chamber for 30-60 min b. Rinse with PBS for 2 min., 3 times.	30-60
4. Rabbit Antibody Enhancer (Ready-to-use). Reagent 1	a. Apply 2 drops (100 µL) or enough volume of RABBIT ANTIBODY ENHANCER to cover each section. Incubate in moist chamber for 10 min. b. Rinse with PBS for 2 min., 3 times.	10
5. POLYMER-HRP for Rabbit (Ready-to-use) Reagent 2	a. Apply 2 drops (100 µL) or enough volume of POLYMER-HRP for Rabbit to cover each section. Incubate in moist chamber for 10 min. b. Rinse with PBS for 2 min, 3 times.	10
6. CHROMOGEN Reagent 3A: AEC Substrate (20x) Reagent 3B: AEC Chromogen (20x) Reagent 3C: Hydrogen Peroxide (20x)	a. Add 1 drop of Reagent 3A into 1ml distilled water, mix well. Then add 1 drop or 2 drops (for higher sensitivity and contrast) of Reagent 3B and 1 drop of Reagent 3C in the diluted substrate buffer. Mix well. Protect from light and use within 1 hour. b. Apply 2 drops (100 µL) or enough of mixture completely cover tissue. Incubate for about 5 min. Monitor the color development under microscope. c. Rinse with tap water for 1-2 min. AEC is alcohol soluble, do not dehydrate!	5
7. HEMATOXYLIN Supplied by user	a. Counterstain with 2 drops (100 ul) or enough volume of Hematoxylin to cover tissue completely and wait about 15-20 seconds. b. Rinse well under tap water for 1-2 minutes. c. Put slides in PBS until show blue color (about 30-60 seconds). d. Rinse well in distill or tap water	15-20 seconds
8. Mounting medium: Supplied by user	Follow the manufacture data sheet procedure for mounting. Recommended product: 1. NeoBio Mount AQ (Cat# NB-23-00155-3, 18ml) for AEC, AP-Red, and AP-blue. 2. NeoBio Mount Perm (Cat.# NB-23-00156, 18ml), for DAB 3. NeoBio Mount Universal (Cat.# NB-23-00157-2, 18ml or NB-23-00157-1, 100ml), universal permanent mounting medium. Can be used with or without cover slip	Refer to insert

Protocol Notes:

1. The fixation, tissue slide thickness, and primary antibody dilution and incubation time effect results significantly. Investigator needs to consider all factors and determine optimal conditions when interpret the result.
2. Pre-antibody blocking is optional and can be omitted if primary antibodies are diluted in buffers containing 2-10% normal Mouse serum. (NB-23-00187-1; 100ml or -2; 18ml)

Precautions:

Please wear gloves and take other necessary precautions.

Remarks:

For research use only.

Storage:

Store at 4°C.

Related products

Product	Catalog No.	Size
PolyStain 2-Step Plus Kit - HRP Mouse bulk kit (without chromogen)	NB-23-00061-1	110ml
PolyStain 2-Step Plus Kit - HRP Mouse AEC kit	NB-23-00061-2 / -3	18ml 6ml
PolyStain 2-Step Plus Kit - HRP Goat kit Bulk Kit (without chromogen)	NB-23-00063-1	110ml
PolyStain 2-Step Plus Kit - HRP Goat AEC kit	NB-23-00063-2 / -3	18ml 6ml
PolyStain 2-Step Plus Kit - HRP Broad Bulk Kit (Without chromogen)	NB-23-00060-1	110ml
PolyStain 2-Step Plus Kit - HRP Broad AEC Kit	NB-23-00060-2 / -3	18ml 6ml
PolyStain 2-Step Plus Kit - HRP Rat-NM (No cross to Mouse) Bulk kit (without chromogen)	NB-23-00064-1	110ml
PolyStain 2-Step Plus Kit - HRP Rat-NM (No cross to Mouse) AEC kit	NB-23-00064-2 / -3	18ml 6ml
PolyStain 2-Step Plus Kit - HRP Mouse-NR (No cross to Rat) Bulk kit (without chromogen)	NB-23-00064-1	110ml
PolyStain 2-Step Plus Kit - HRP Mouse-NR (No cross to Rat) AEC kit	NB-23-00064-2 / -3	18ml 6ml
AEC Kit (20x concentrated)	NB-23-000140	12ml
NeoBio Mount Universal	NB-23-000157-1 / -2	18ml 100ml