

Power-Stain™ 1.0 Poly HRP AEC Kit for Mouse + Rabbit

<u>Cat No.</u>	<u>Quantity</u>
52-0022	15 mL
54-0022	100 mL

Intended Use

For Research Use Only.

This kit is intended for use with Mouse and Rabbit Primary Antibodies and other ancillary reagents supplied by user for qualitative detection of targeted protein (antigen) using immunohistochemistry (IHC) methodology by light microscopy on routine formalin-fixed, paraffin-embedded (FFPE) tissue section.

Interpretation of any positive or negative staining shall be supported by implementation of a proper control, and must be made within the context of the patient's clinical history and other diagnostic test by a qualified pathologist.

Summary And Explanation

This kit is a non-biotin system and utilizes a Poly HRP (horseradish peroxidase) conjugate to locate where the mouse or rabbit primary antibody is bound to the target antigen. The complex formed between Poly HRP conjugate and the mouse or rabbit primary antibody is observed through the use of a substrate-chromogen solution, which when added, results in a colored precipitate at the antigen location. The staining location and pattern is easily observable by light microscopy.

Reagents Supplied

Reagent A: One bottle of ready-to-use **Poly HRP Conjugate for Mouse + Rabbit** in an enzyme conjugate buffer containing stabilizing proteins and anti-microbial agents.

Reagent B: One bottle of Ready-To-Use **AEC Substrate (Single Solution)**

Storage

Store at 2-8°C. Do not freeze.

All performance claims are void after the kit expiration date.

Materials Required But Not Supplied

Primary Antibody (Genemed offers prediluted and concentrate Primary Antibodies)

Primary Antibody Diluent (Cat No. 10-0001)

Reagent Control (Non-immune Mouse IgG Cat No. 60-0045 and Non-Immune Rabbit IgG Cat No. 60-0060)

Positive and Negative Control Specimens

Microscope Slides, Positively Charged

Xylene

Ethanol

Endogenous Peroxidase Blocking Solution - 3% Hydrogen Peroxide (Cat No. 10-0056)

Wash Buffer - 10 mM Phosphate Buffer Saline, pH 7.4; optional with 0.05% Tween 20

Hematoxylin (Cat No. 10-0027, 10-0049)

Antigen retrieval reagents (e.g. Cat No. 10-0022 Citrate Buffer pH 6.0 1X; Cat No. 10-0020 Citrate Buffer

pH 6.0 20X; Cat No. 10-0021 Tris Buffer pH 9 20X; Cat No. 10-0023 Tris Buffer pH 9 1X; Cat No. 10-0046

Tris EDTA Buffer pH 9 1X; Cat No. 10-0037 Tris EDTA Buffer pH 9 20X; Cat No. 10-0024 Proteinase K; Cat

No. 10-0025 Trypsin; Cat No. 10-0050 Ficin)

Aqueous Mounting Solution (GVA Aqueous Mounting Solution Cat No. 10-0033)

Precautions

For professional users only.

AEC Substrate (Single Solution), Reagent B, is susceptible to contamination from oxidizing agents. To avoid contamination, do not pipet Reagent B directly out of the bottle.

Proper handling of this product as with any product derived from biological sources should be used according to local and applicable regulations.

Risk Statements: AEC Chromogen

R61 May cause harm to the unborn child.



- Procedural Notes** The directions accompanying this kit provide step by step instructions for optimal staining. Any change in procedure or incubation times may give erroneous staining results. For optimal results, do not substitute reagents provided in the kit.
- Reagent A shall be equilibrated to room temperature readily before usage. All incubations should be performed at room temperature in a humid environment.
- Do not allow the tissue section to dry out at any point in the staining procedure. The reagents are for single use.
- Preliminary Preparation Of Slides** Routine de-paraffinization and rehydration of tissue section.
- Antigen retrieval as required by the primary antibody.
- Control Slides** Three types of control slides are necessary for proper interpretation.
- Positive Tissue Control – A tissue containing the desired antigen.
- Negative Tissue – A tissue that does not contain the desired antigen.
- Reagent Control – A slide to be treated with a homologous non-immune immunoglobulin.
(Cat No. 60-0045 or Cat No. 60-0060)
- Staining Protocol**
- Step 1: Endogenous Peroxidase Blocking
- Submerge slides in Peroxidase Blocking Solution for 10 minutes.
 - Wash slides with Wash Buffer to remove excess Peroxidase Blocking Solution.
 - Tap off excess liquid and carefully wipe around tissue.
- Step 2: Primary Antibody Incubation
- Prepare Primary Antibody to optimum concentration. If necessary, dilute with Primary Antibody Diluent.
 - Add 2 drops (100 µL) or as much as needed of Primary Antibody to completely cover each tissue.
 - Incubate for 30-60 minutes at room temperature.
 - Rinse 3 times with Wash Buffer for 2 minutes each.
 - Tap off excess liquid and carefully wipe around tissue.
- Step 3: Poly HRP Conjugate Incubation (Reagent A)
- Add 2 drops (100 µL) or as much as needed of Enzyme Conjugate to completely cover each tissue.
 - Incubate for 15 ± 1 minutes.
 - Rinse 3 times with Wash Buffer for 2 minutes each.
 - Tap off excess liquid and carefully wipe around tissue.
- Step 4: Substrate/Chromogen
- Add substrate solution on slides and incubate 10 – 30 minutes at room temperature.
- Note: Do not equilibrate the entire bottle of reagent at room temperature. Do not need to equilibrate at room temperature before applying on specimen. Do not return excess AEC solution to primary storage container.**
- Rinse slides with tap water to remove excess substrate solution.
 - Proceed with normal counterstaining and mounting protocol.
- Step 5: Counterstaining
- Counterstain with Hematoxylin according to manufacturer's instruction.
- Step 6: Mounting
- Mount and coverslip the specimen using an **aqueous mounting medium**.



Interpretation Of Staining Results

Step 1: Review Positive and Negative Controls. Do not proceed to next step if the staining intensity does not meet requirements.

Step 2: Score the tested specimens.

	Positive Control Tissue	Negative Control Tissue	Reagent Control	Test Tissue	Analysis of Result
1	+	--	--	+	Specimen contains the antigen
2	+	--	--	--	Specimen does not contain the antigen

Troubleshooting

	Positive Control Tissue	Negative Control Tissue	Reagent Control	Test Tissue	Analysis of Result
1	--	--	--	--	No staining
2	Weak +	--	--	+/-	Weak staining
3	+	+	+	+	High background staining

Possible causes and suggested action for: No staining on any slide

1. Reagents not used in correct order.
→ Repeat procedure following Staining Protocol Instructions.
2. Substrate-Chromogen reagent has expired.
→ Use fresh Substrate-Chromogen solution.
3. Primary antibody incubation steps were omitted or dilution was incorrect or wrong antibody was used.
→ Repeat procedure following Staining Protocol Instructions using incubation times specified.
→ Repeat procedure using correct dilution for primary antibody or correct primary antibody.
4. Wrong Pretreatment.
→ Repeat procedure using correct pretreatment.

Possible cause and suggested action for: Weak staining on all slides

1. Substrate-Chromogen reagent has expired.
→ Use fresh Substrate-Chromogen solution.
2. Incubation times were not long enough.
→ Repeat procedure following Staining Protocol Instructions using incubation times specified.
3. Specimen retained too much liquid after rinsing steps.
→ Tap off excess liquid and carefully wipe around specimen after rinsing steps.
4. Peroxidase Enzyme Conjugate (Reagent A) exposed to Sodium Azide.
→ Use buffer without Sodium Azide, or check if Reagent A is contaminated with Sodium Azide during use or aliquot/pipetting.
5. Primary antibody dilution was incorrect.
→ Repeat procedure following Staining Protocol Instructions using incubation times specified.
→ Repeat procedure using correct dilution for primary antibody.
6. Insufficient Pretreatment.
→ Repeat procedure using correct pretreatment.





Possible cause and suggested action for: High background staining on all slides

1. Specimens contain high endogenous peroxidase activity.
→ Check preparation of Peroxidase Solution and verify timing of specimens submerged in solution.



2. Inadequate rinsing of slides.
→ Use freshly prepared buffer solutions. Follow rinsing instructions specified.
3. De-paraffinization not complete.
→ Use fresh xylene. Check slides are de-paraffinized before rehydration step.
4. Over-reaction of substrate.
→ Do not incubate substrate longer than specified in procedure.
5. Specimens dry out during staining procedure.
→ Incubate in humid environment. Wipe fewer than 10 slides at a time before adding next solution.
6. Wrong Pretreatment.
→ Repeat procedure using correct pretreatment.

Symbols

			
Catalog No.	Batch No.	Temperature Range	Use By