

## **STAT-Q™ AEC SYSTEM for IHC STAINING of HUMAN and ANIMAL TISSUES**

*No-Wash, Background Free, Rapid IHC staining of human and animal tissues*

***For staining MOUSE & RABBIT & RAT Primary Antibodies***

☐ **Large volume; 60 ml of STAT-Q™ Peroxidase-AEC Staining System:**

Product number NB314KLC (with AEC), 800-1,000 slides

☐ **Small Volume; 20 ml of STAT-Q™ Peroxidase-AEC Staining System:**

**Product number:** NB314KLC-20 (with AEC), 200-300 slides

### **INTRODUCTION**

Immunostaining (IHC) detection systems (kits) are used to determine the presence, localization and density of antigens in binding assays. In IHC, antigens are visualized by enzyme immunochemical assays.

### **PRODUCT DESCRIPTION**

**STAT-Q™ Rapid IHC System** is a Background-Free and minimal-wash IHC staining kit bio-engineered for No-Background, 5-second washes and short incubation steps. This staining system is universally applicable to IHC staining of Mouse, Rabbit and Rat primary antibodies and for IHC staining of all human tissues and all animal species tissues and cell preparations. This system is ideal for staining all tissues and cells regardless of their method of processing (e.g., paraffin sections, cryostat sections, cytocentrifuge preparations or cell smears).

**STAT-Q™ Rapid IHC System** is designed as a highly sensitive 3-Step system for IHC staining of human and animal tissues. This system detects Mouse, Rat and Rabbit primary antibodies. The system is designed to be virtually free of background and it does not require protein or serum blocking when staining human tissues. However, when staining animal tissues, a 30-minute blocking step with Innovex Background Buster prior to application of primary antibody is highly recommended. **STAT-Q™ Rapid IHC System** is also designed to eliminate the need for re-titration of primary antibodies upon switch over to this system. When employing STAT-Q system, no adjustment of current primary antibody dilutions is necessary; Simply replace STAT-Q kit in place of the current IHC detection system. In addition to shorter incubation steps, STAT-Q detection system also offers the choice of increased primary antibody dilution and/or decreased primary incubation time especially when used with Innovex Signal Enhancing Wash Buffer in place of PBS buffer. Do not use tris buffer for the rinse steps.

### **SYSTEM COMPONENTS (reagents provided in the kit)**

- PEROX-BLOCK (Stable Peroxide Block), included in the kit.
- STAT-Q Multivalent anti Mouse, anti Rabbit, anti Rat Secondary Linking antibody.
- STAT-Q Stabilized peroxidase (HRP) enzyme (with no loss of enzyme activity with time).
- Stable Turbo action 2-component Liquid AEC.
- AEC Enhancer (optional) but recommended.

### **APPLICATION / INTENDED USE**

This product is intended for IHC staining of mouse, rabbit and rat primary antibodies in human and animal tissues and cell preparations.

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## **SYSTEM COMPONENT SPECIFICATIONS**

### **Recommended incubation times for the system are:**

- Stable Peroxide Block: **15-minutes** (stable peroxide block is included in the kit).
- Mouse or Rabbit or Rat primary antibody (*not provided*): Follow suppliers recommended incubation time for the primary antibody employed.
- STAT-Q Secondary Linking Antibody: **10-minutes**.
- Peroxidase (HRP) enzyme-Label: **10-minutes**.
- Stable Liquid AEC chromogen: **10-minutes**.
- AEC Enhancer: **2-minutes**.

## **INSTRUCTIONS**

(ALL INNOVEX PRODUCTS ARE DESIGNED TO BE IMPLEMENTED AT ROOM TEMPERATURE (NO HEAT IS REQUIRED).

DO NOT USE TRIS BUFFER.

NO protein or serum blocking required when staining human tissue. A 30-minute blocking with Innovex Background Buster is highly recommended when staining animal tissues. A 5 second rinses in between incubations steps are sufficient. No extensive washes are required when staining with Innovex staining systems

1. Following deparaffinization quench endogenous peroxidase activity by applying INNOVEX PEROX BLOCK (STABLE PEROXIDE BLOCK) for **15-minutes**; OR in absence of INNOVEX Peroxide Block; achieve the same aim by immersing tissue slides in freshly made 3% hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) prepared in DI water. This step is essential to eliminate red blood cell staining.
2. Rinse with 4 quick changes of water.
3. Incubate the section or smear for **30 minutes to 1-hour** with mouse, rabbit or rat primary antibodies (not provided); Follow manufacturer' recommended incubation time for the primary antibody employed.
4. Rinse with PBS or HRP-Enhancing Wash Buffer for **5-seconds**.
5. Incubate with STAT-Q Multivalent Linking Antibody for **10-minutes**.
6. Rinse with PBS or HRP-Enhancing Wash Buffer for **5-seconds**.
7. Incubate with STAT-Q Peroxidase (HRP) label for **10-minutes**.
8. Rinse with PBS or HRP-Enhancing Wash Buffer for **5-seconds**.
9. Incubate with mixed AEC/substrate solution for **10-minutes** (*See chromogen mixing protocol below*).
10. Rinse in tap water.
11. OPTIONAL: Apply AEC Enhancer and incubate for 2-minutes; Rinse with water.
12. Counterstain with hematoxylin (Innovex Product # NB305).
13. Mount slides with aqueous permanent "Advantage Mounting Media" (Innovex Product #NB300).

DO **NOT** COVERSLIP SLIDES WITH ORGANIC BASED MOUNTING MEDIA; AEC DISSOLVES IN ALCOHOL AND XYLENE.

### **AEC Substrate/Chromogen Mixing Protocol**

- **MIX AEC by adding 2 drops of AEC chromogen** (component 2) **to 2 ml of Ready-To-Use Substrate Buffer** (component 1) in the provided graduated mixing tube and mix. Left over mixed AEC substrate/chromogen solution is stable for one week when kept refrigerated. This minimizes the reagent waste and disposal cost.

When darker AEC stain is desired, apply Innovex AEC Enhancer solution (product# NB319) for 2-minutes following the water rinse of AEC step and before counterstaining. AEC Enhancer is included in the kit.

## **STORAGE CONDITIONS**

Store in refrigerator at 2-8°C through expiration date noted on the vials.

### **Important Notes:**

- Innovex STAT-Q™ staining systems and components are no wash, no background staining Reagents. A one-time rinse step of 5-second in between incubation steps are sufficient.
- Innovex STAT-Q™ staining systems and primary antibodies are free of background and do not require serum blocking or protein blocking when staining human tissues.

**FOR RESEARCH USE ONLY**

**FOR ADDITIONAL TECHNICAL SUPPORT**

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