



## **STAT-Q™ HUMAN/ ANIMAL STAINING SYSTEM**

*No-Wash, Background Free, Rapid Immuno-Peroxidase Staining for both human and animal tissues*

*And*

**For staining MOUSE & RABBIT Primary Antibodies**

□ **60 ml of STAT-Q™ 3-Step Peroxidase Staining System:**

IMI01811E (with AEC) or IMI01813E (with DAB), approx. 800-1,000 slides (3 Year Shelf-Life)

### **INTRODUCTION**

Immunostaining detection systems are used to determine the presence, localization and density of antigens in binding assays. In immunohistochemistry (IHC) and in ELISA procedures, antigens are either visualized or measured by enzyme immunochemical assays. These detection systems usually consist of a second step reagent of a biotinylated secondary antibody and a third step reagent of an enzyme such as alkaline phosphatase or horseradish peroxidase conjugated to avidin or streptavidin. The enzyme is then incubated for a short time with its appropriate substrate and chromogenic substance for color development. The rate of color development measures the enzyme concentration by qualitative (IHC), semi quantitative (image analysis) or quantitative (ELISA) methods.

### **PRODUCT DESCRIPTION**

**STAT-Q™ Rapid IHC System** is a No-wash IHC staining system engineered for No-Background, No-Wash and short incubation steps. This staining system is universally applicable to all mouse & rabbit primary antibodies and to all animal species and human tissues and cell specimens. 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 three step indirect system for IHC staining of human and animal tissues. This system detects both mouse and rabbit primaries. 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™ 3-Step, Rapid IHC System** is also designed to eliminate the need for re-titration of primary antibodies when switching over to this system. When employing STAT-Q system, no adjustment of currently employed primary antibody dilutions are necessary. Simply replace STAT-Q in place of the current detection system. In addition to shorter incubation steps, STAT-Q detection system also offers users the choice of increased primary antibody dilution and/or decreased primary incubation time when employing Innovex Signal Enhancing Wash Buffer in place of PBS or tris buffers for the rinsing steps.

### **SYSTEM COMPONENTS**

- Multivalent anti mouse and anti rabbit biotinylated secondary linking antibody.
- Stabilized horseradish peroxidase-streptavidin label (with no loss of activity of peroxidase enzyme activity with time)
- StableTurbo action two component AEC or two components liquid DAB for use with Peroxidase-label.

### **APPLICATION / INTENDED USE**

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

## **SYSTEM COMPONENT SPECIFICATIONS**

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

- Mouse or Rabbit primary antibody (not provided): When using Innovex primary antibodies, do not alter incubation times as they are engineered to perform optimally with either PBS or Signal Enhancing Wash Buffers at **10-30 minutes**, with the **Stat-Q™ Staining System** (please see antibody data sheets). When using other manufacturer's antibodies, follow their recommended incubation time.
- Biotinylated Linking Antibody: **10 minutes**.
- Horseradish Peroxidase enzyme conjugated strepavidin label: **10 minutes**.
- Stable Turbo AEC: **10 minutes** or liquid DAB chromogen: **5 minutes**.

## **INSTRUCTIONS**

**(ALL INNOVEX PRODUCTS ARE DESIGNED TO BE IMPLEMENTED AT ROOM TEMPERATURE (NO HEAT IS REQUIRED). 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 Two 5 second rinses in between incubations steps are sufficient. No extensive washes are required when staining with Innovex staining systems.**

1. Quench endogenous peroxidase activity by immersing tissue slides for 10 minutes in freshly made 3%hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) prepared in distilled water. This step is essential to eliminate red blood cell staining.
2. Rinse with water for 30 seconds.
3. For human tissues incubate the section or smear for 10-30 minutes with mouse or rabbit primary antibodies (not provided). When using other manufacturer's primary antibodies observe their recommended incubation time. For animal tissues; incubate with primary antibody for 30 minutes to 1 hour
4. Rinse with PBS or HRP-Enhancing Wash Buffer for 10 seconds to 1 minute.
5. Incubate with the secondary linking antibody for 10 minutes.
6. Rinse with PBS or HRP-Enhancing Wash Buffer for 10 seconds to 1 minute.
7. Incubate with Peroxidase-Streptavidin label for 10 minutes.
8. Rinse with PBS or HRP-Enhancing Wash Buffer for 10 seconds to 1 minute.
9. Incubate with mixed AEC/substrate for 10 minutes or mixed DAB/substrate solution for 5 minutes (See chromogen mixing protocol below).
10. Rinse in tap water.
11. Counterstain with hematoxylin (Innovex Product #NB305). Mount slides with xylene based mounting media or with aqueous based permanent "Advantage Mounting Media" (Innovex Product #NB300).

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

- When using AEC chromogen, **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 two weeks when kept refrigerated. This minimizes the reagent waste and disposal costs and efforts.
- When using DAB chromogen, **mix DAB by adding 2 drops of DAB 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 DAB substrate/chromogen solution is stable for two weeks when kept refrigerated. This minimizes reagent waste and disposal costs and efforts.

When darker DAB stain is desired, apply Innovex Quick DAB Enhancer solution (Innovex Product# NB308) for 3 minutes at room temperature following the water rinse after DAB. **Innovex DAB Enhancer can be applied before or after counterstaining for 3 minutes. This DAB enhancer does not cause any background.**

### **Important Notes:**

- Innovex **STAT-Q™ (3-step)** staining systems and components are **no wash, no background** staining reagents. A one time rinse step of 10 second in between incubation steps are sufficient.
- Innovex **STAT-Q™ (3-step)** staining systems and primary antibodies are **free of background**. Innovex STAT-Q staining systems **do not require normal serum blocking or protein blocking when staining human tissues**



**FOR ADDITIONAL TECHNICAL SUPPORT:**

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