



# IHC Polymer

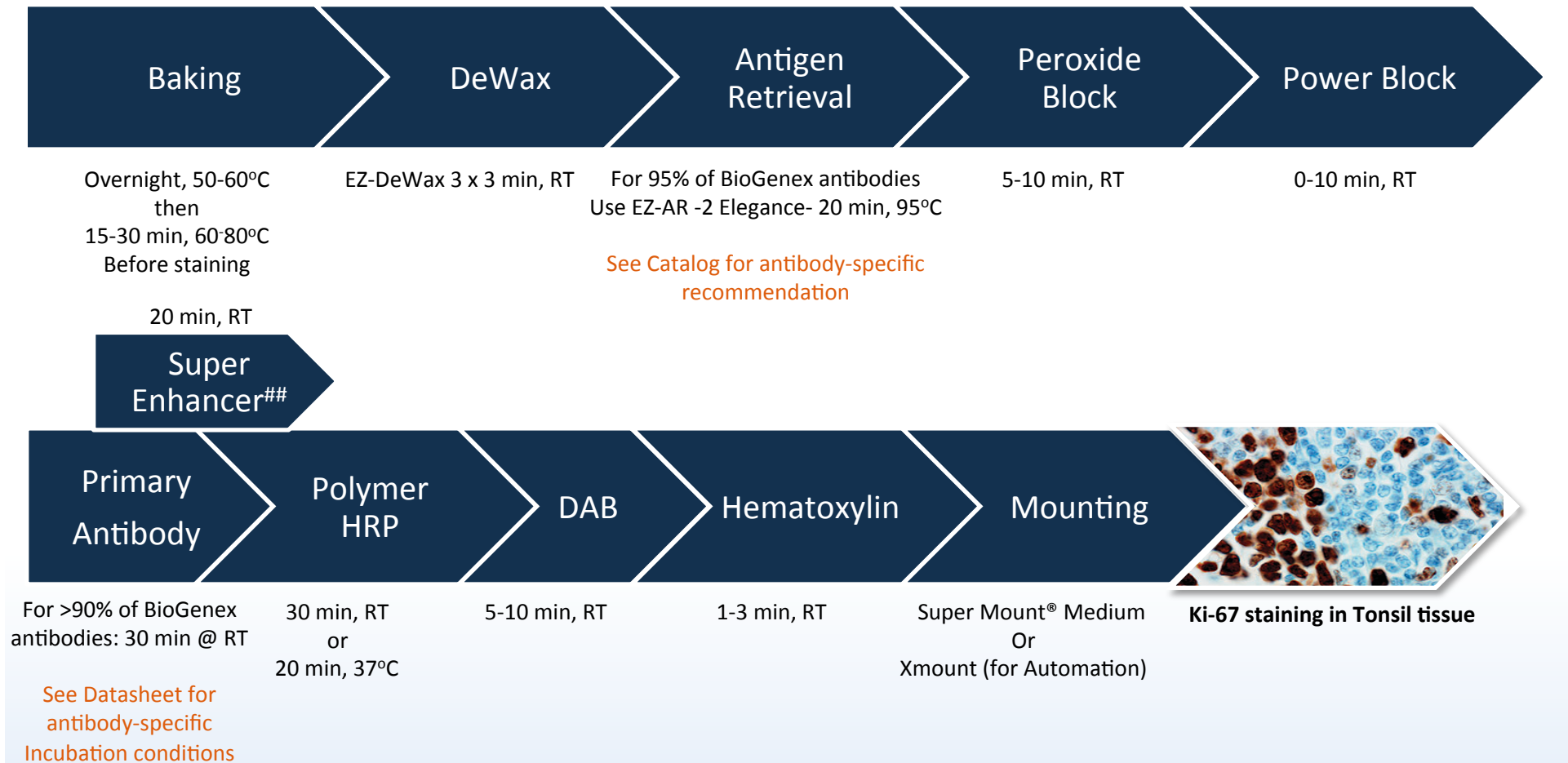
Presented for: **BioGenex Website**

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# Immunohistochemistry (IHC) Quick Guide<sup>#</sup> Super Sensitive™ Polymer-HRP kits.



# For manual use with FFPE tissue slides. Washing steps omitted for simplicity- for full protocol see Poly-HRP kit datasheet. Optimization may be required due to variation in tissues/processing.

## Not Required when using OneStep Poly-HRP Detection System

# Immunohistochemistry (IHC) Quick Guide

## Super Sensitive™ Polymer-HRP kits.

**1. Baking** – Heating the tissue slide helps remove humidity and promote attachment of tissue to slide. It also helps wax removal in the following De-Wax step. Depending on tissue type and thickness, incubation temperature and time may vary.

**2. DeWax** – BioGenex EZ-DeWax Solution (HK585-5K & HK584-5K) is a “one-step” product that simultaneously enables the removal of paraffin and allows rehydration of the tissue with a single xylene-free, non-toxic reagent.

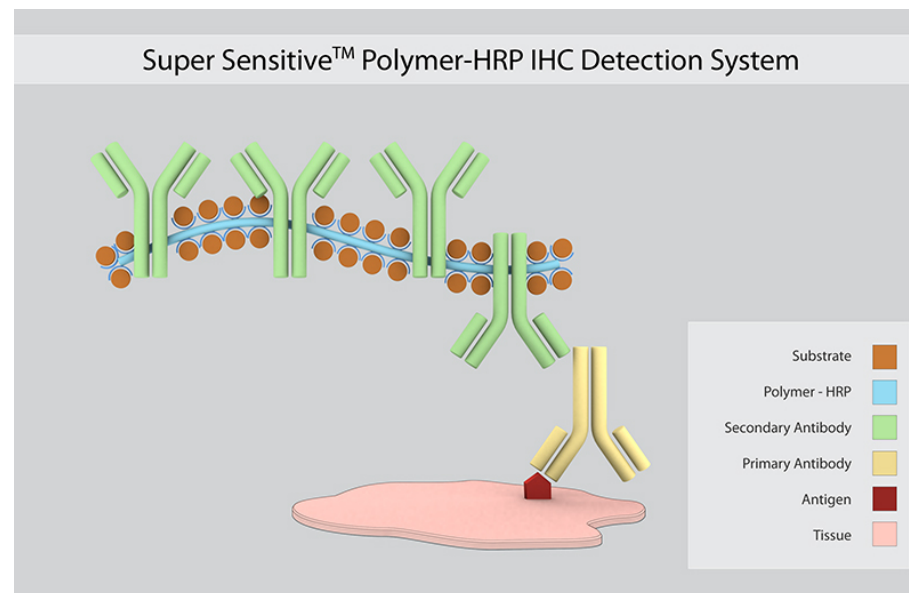
**3. Antigen-Retrieval** BioGenex is the inventor of Antigen Retrieval enabling technology. Antigen-retrieval step breaks the formalin induced cross-linking bonds between epitopes and unrelated proteins, thereby allowing better penetration of antibody and accessibility of epitopes. BioGenex solutions facilitate the production of highly reproducible and superior quality stains in a considerably short period of time without compromising the morphology and antigenicity of the tissue. The EZ-AR2-Elegance Solution advanced formulation (HX032-YCD & HK547-XAK) has unique superheating properties and was validated to give the best staining with 95% of BioGenex Antibodies (see datasheet for Ab-specific recommendation).

**4. Peroxide Block** (HK111-50K) – Hydrogen peroxide is used to inactivate endogenous peroxidase when Horseradish Peroxidase is used for staining. This eliminates background, especially in tissues such as red blood cells, kidney, and liver.

**5. Power Block** (HK083-50K) – This reagent contains buffer, casein and preservative and reduces background staining due to non-specific binding of antibodies. It is a potent blocker and should not remain on the tissue more than ten minutes.

**6. Primary Antibody** - BioGenex offers >400 antibodies for IHC staining. Antibodies are available in ready-to-use (RTU) or concentrated formats and are for manual or automated staining. BioGenex antibodies are optimized to provide maximum signal with minimum background.

**7. Polymer-HRP** – Novel, ready to use, universal antibody detection system using a non-biotin polymeric technology (see figure). This reagent contains a mixture of goat anti-rabbit and anti-mouse secondary antibodies



# BioGenex Immunohistochemistry (IHC) Quick Guide

## Super Sensitive™ Link-Label kits

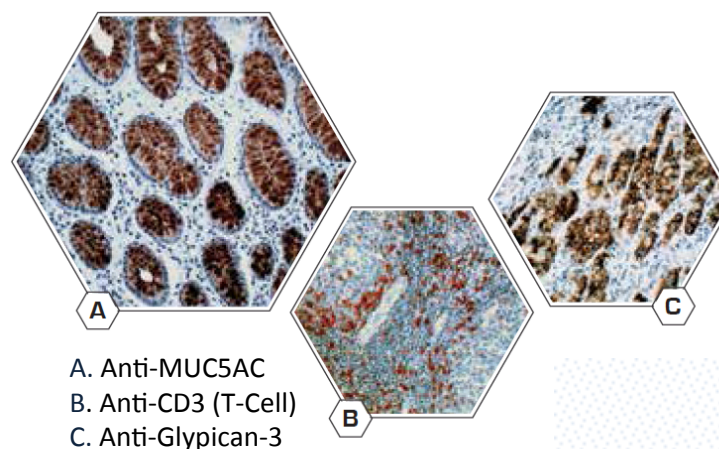
**7. (cont.)** conjugated to a polymerized horse radish peroxidase (Poly-HRP). The 2-step kit requires pre-incubation with Super Enhancer to enhance binding. As the system is not based on the biotin-avidin system, problems associated with endogenous biotin are completely eliminated. The technology allows excellent cell penetration ability compared with other polymer-HRPs.

**8. DAB** (HK542-XAKE) – DAB (3,3'-diaminobenzidine tetrahydrochloride) is a chromogenic peroxidase substrate. HRP catalyzes the oxidation of DAB to form a brown precipitate which stains the tissue in close proximity to the HRP conjugated antibody. DAB is insoluble in alcohol, xylene or water and therefore is compatible with most clearing agents and mounting media.

**9. Hematoxylin** (HK100-5K, HK100-9K) – (BioGenex Mayer's hematoxylin is a blue nuclear counterstain that makes the stained tissues more easily visible. It is alcohol and xylene insoluble and therefore compatible with most clearing agents and mounting media.

**10. Mounting-** Mounting seals the biological specimens and is an essential step before microscopic evaluation. BioGenex SuperMount® Permanent Mounting Medium (HK079-5K, HK079-7K) is a polymer based aqueous mounting media that does not require the use of a coverslip. XMount™ Mounting Medium (HX035-YCD, HX035-10X) is a permanent mounting medium that has been optimized for use with BioGenex Xmatrix automation platform. BioGenex also offers Aqueous Mounting Medium (HK099-5K) - a glycerol-based mounting medium that require the use of a coverslip. It is intended for short-term specimen storage and is compatible with most chromogens and counterstains.

**11. Washing steps** – Typically 2-3 washes between each step are required. BioGenex Super Sensitive™ Wash Buffer (HK583-5K) is a phosphate buffered saline (PH 7.4) with surfactant and is the best choice in order to ensure optimal staining. The buffer promotes even spreading of antibodies and other reagents to avoid inconsistent results.



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## Super Sensitive™ Link-Label kits

For manual use (drop bottles)    
 For i6000 Automation (Barcode labeled)    
 For Xmatrx Automation (Elite - RFID tagged vials)

### Detection Systems - Super Sensitive Polymer HRP (For mouse & rabbit antibodies)

SKU	Size	Super enhancer	Polymer-HRP	DAB buffer	DAB Chromo.	Peroxide block	Power block	Hematox.	EZ-AR Eleg. 1,2 & 3 Sol.	Negative ctrl IgG
QD400-60KE	60 test	6 ml	6 ml	10 ml	2 ml	6 ml	6 ml	6 ml	-	3 ml-Rabbit, 3 ml-Mouse
QD420-YIKE	500 test	50 ml	50 ml	50 ml	5 ml	-	-	-	-	-
QD430-XAKE	1000 test	100 ml	100 ml	100 ml	10 ml	-	-	-	-	-
QD440-XAKE	1000 test	100 ml	100 ml	-	-	-	-	-	-	-
QD410-YAXE i6000	200 test	20 ml	20 ml	5x10 ml	4ml	20 ml	20 ml	20 ml	-	-
QD550-YCXE Xmatrx -Infinity	200 test	15 ml	15 ml	5x11 ml	4 ml	4x16 ml	21 ml	21 ml	16ml	-
QD550-YCDE Xmatrx-Elite	200 test	16 ml	16 ml	4x11 ml + 5 RFID vials	7 ml	3x16 ml	3x16 ml	3x16 ml	3x16ml	-

### Detection Systems - Super Sensitive One-Step Polymer-HRP (For mouse & rabbit antibodies)

SKU	Size	Polymer-HRP	DAB buffer	DAB Chromo.	Peroxide block	Power block	Hematox	EZ-AR Eleg. 1,2 & 3 Sol.
QD620-YIKE	500 test	50 ml	50 ml	5 ml	-	-	-	-
QD630-XAKE	1000 test	100 ml	100 ml	10 ml	-	-	-	-
QD610-YAXE i6000	200 test	16 ml	4x11 ml	4 ml	3x16 ml	3x16 ml	3x16 ml	-
QD610-YADE Xmatrx-Elite	200 test	16 ml	4x11 ml + 5 RFID vials	7 ml	3x16 ml	3x16 ml	3x16 ml	3x16 ml



# Thank You

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