

## **AmpliStain™ - novel detection systems for Immunohistochemistry (IHC) and Colorimetric In-Situ Hybridization (CISH)**

Fitzgerald Industries is already a leading provider of PolyHRP technologies, which were developed primarily for ultra sensitive ELISA. PolyHRP products are not applicable in IHC staining protocols as they cannot permeate tissue sections because of their larger size. However, we are excited to introduce a brand new comprehensive line of the enhanced detection products for the most demanding IHC applications. AmpliStain™ and StrongZyme™ offer IHC customers excellent quality performance in addition to the highest level of consistency, stability and robustness in just one step.

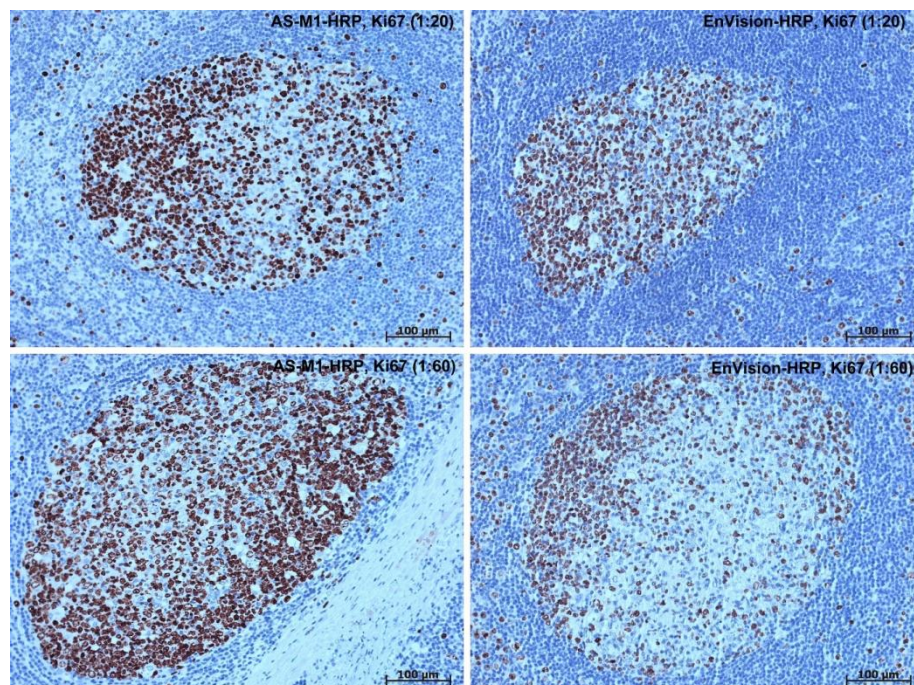
### **AmpliStain™ One-Step Reagents**

AmpliStain™ 1-Step detection systems are composed of single reagents comprising StrongZyme™ Goat anti-Mouse, Goat anti-Rabbit and Rabbit anti-Goat conjugates made of specially engineered decarboxylated High Density Nude HRP™ di-, tri- tetra- and pentamers covalently coupled to the affinity purified anti-IgG(H+L) antibodies using proprietary SnakeLinker™ technology.

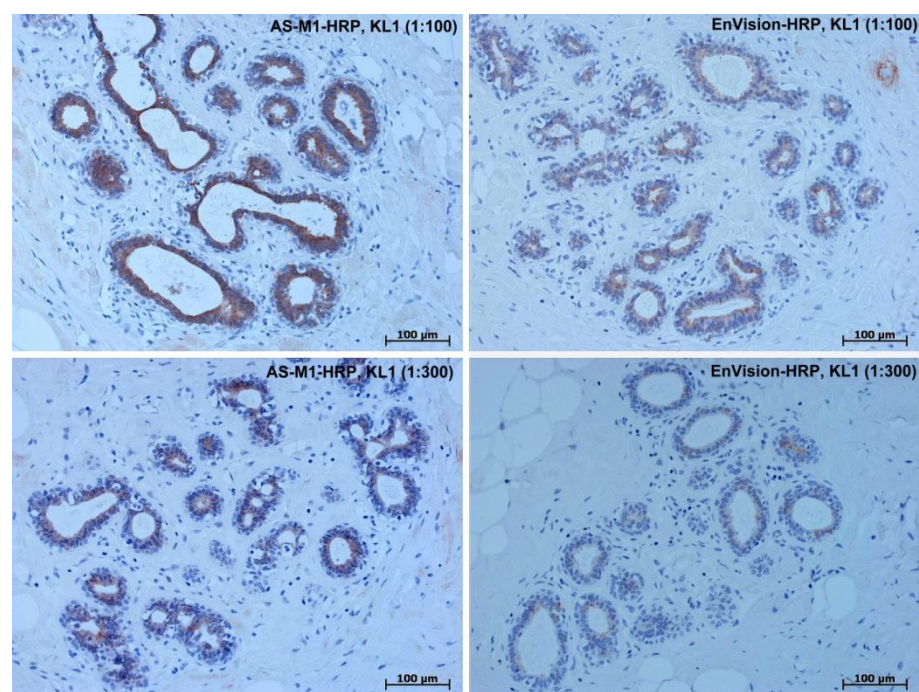
Decarboxylation decreases the hydrodynamic radius of HRP so that carbohydrate reduced Nude HRP™ molecules become smaller in size. Application of the long flexible linkers yields loose-jointed conjugate design. These factors make StrongZyme™ conjugates both exceptionally active in detection and great at penetration - they have very strong enzymatic signal-generating moiety and at the same time are compact, flexible and agile. StrongZyme™ conjugates easily overcome diffusion limitations enabling very sensitive detection of the most challenging low-abundance and hidden nuclear markers. They feature enhanced detection activity with Mouse, Rabbit, and Goat primary antibodies. In direct comparison experiments, AmpliStain™ 1-Step / StrongZyme™ is found to be more sensitive than existent competitor's polymer detection systems (see figure 1).

<b>Catalog No. (Click for datasheet)</b>	<b>Amplistain One Step IHC Reagents</b>	<b>List Price</b>
<a href="#">75R-1061</a>	AmpliStain anti Mouse 1 Step (HRP)	\$245.00
<a href="#">75R-1062</a>	AmpliStain anti Rabbit 1 Step (HRP)	\$245.00
<a href="#">75R-1063</a>	AmpliStain anti Mouse/Rabbit 1 Step (HRP)	\$345.00
<a href="#">75R-1064</a>	AmpliStain anti Goat 1 Step (HRP)	\$295.00

**A**



**B**



**Figure 1A and 1B:** Comparison of AmpliStain™ anti Mouse 1 Step (HRP) (75R-1061) (left panels) with EnVision™ (right panels)+ in staining Ki-67 and KL1. AmpliStain™ gives more intensive staining with three times smaller working concentration of primary antibodies.

## **AmpliStain™ Essentials**

Due to the high power of AmpliStain™ detection, optimal working strength concentrations of primary antibodies are lower than with other detection systems. We strongly recommend re-optimizing the concentration of primary antibody when switching to AmpliStain™ as it can offer significant cost savings through lower consumption of primary antibodies, resulting in more economical IHC protocols.

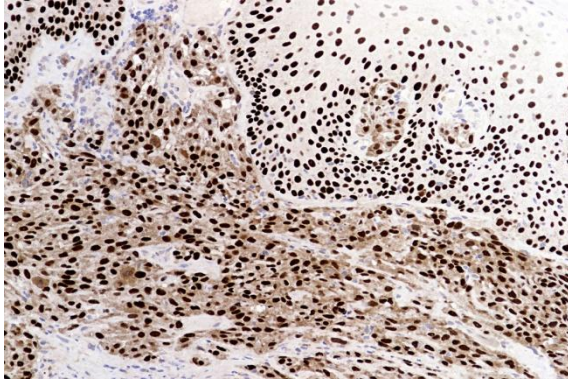
Taking into consideration the diversity of routine clinical diagnostic and experimental research IHC applications, in addition to very different customer requirements, we supply all AmpliStain™ reagents with no fixed use instructions. AmpliStain™ is an open system suggesting unrestricted variety of tailored custom protocols optimized by users addressing their specific needs. All AmpliStain™ reagents are supplied in Ready to Use RESERVE™ format – at a maximum working strength for High Sensitivity detection of the most challenging - rare, low-abundance and/or hidden antigens, using fast 10-15 minute incubation protocols - also with weak, low affinity primary antibodies. If using with more accessible or abundant antigens, and/or within longer incubation protocols, AmpliStain™ reagents can be diluted to the smaller working strength concentrations that will still ensure highly sensitive detection. For that reason, along with AmpliStain™ reagents, we offer Universal IHC Diluent/Blocker/Stabilizer (see description below) as a complementary support product that can be used for diluting of all StrongZyme™ conjugates, HistoLinker™ reagents and, primary antibodies if required.

### **Universal IHC Diluent/Blocker/Stabilizer (UDBS) ([85R-1021](#))**

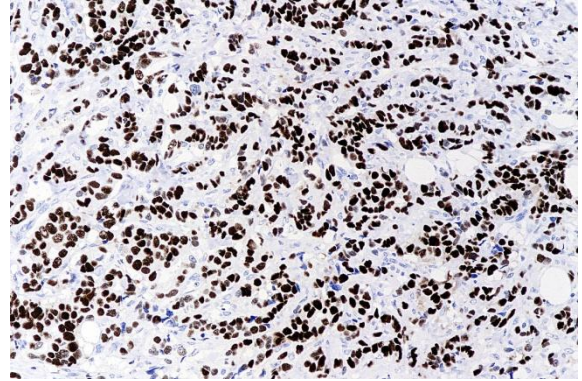
UDBS contains dedicated bright-spectrum anti-microbial IVD preservative/biocide (BND), casein colloid as an efficient blocker of "amorphous" protein-protein non-specific binding, non-ionic detergent, peroxidase and general protein stabilizers and antioxidants. UDBS will maintain working strength conjugate stable >>1 year at +4°C and also longer time (at least up to 6 months) at ambient/room temperature (<25°C) making it dependable and consistent in performance when running continuous daily immunostaining work. UDBS does not contain animal serum components. Should extra immunoglobulin block improve IHC test performance please apply block using e.g. normal goat or horse serum at 5-10%.

Below are some IHC images showing staining patterns achieved using the AmpliStain Product line in different tissues using different monoclonal targets.

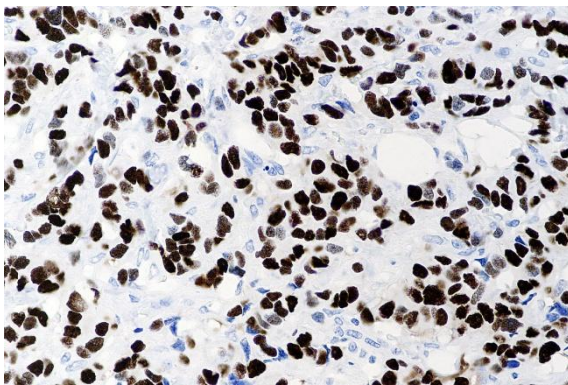




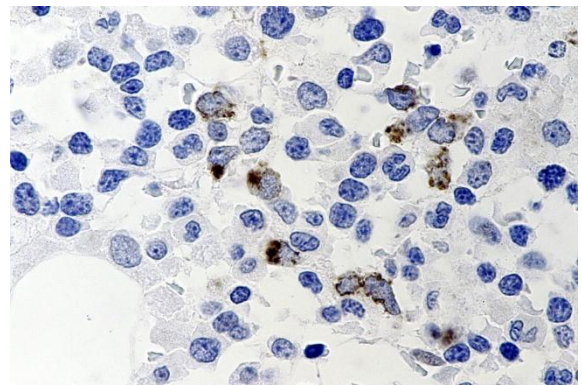
p63 in squamous carcinoma - mouse monoclonal, AmpliStain™ M-1 HRP (75R-1061)



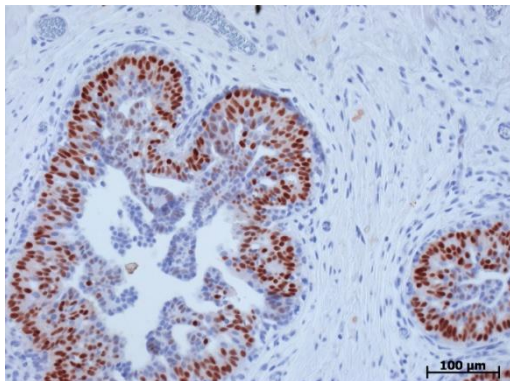
Estrogen receptor in breast carcinoma - mouse monoclonal, AmpliStain™ M1-HRP (75R-1061)



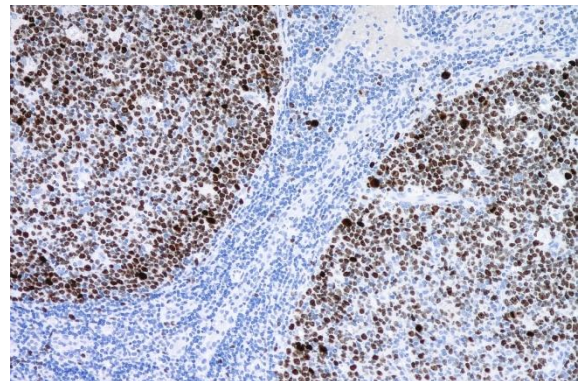
Estrogen receptor in breast carcinoma - rabbit monoclonal, AmpliStain™ R1-HRP (75R-1062)



CD34 in myelodysplastic syndrome-RAEB 1 - mouse monoclonal, AmpliStain™ M1-HRP (75R-1061)

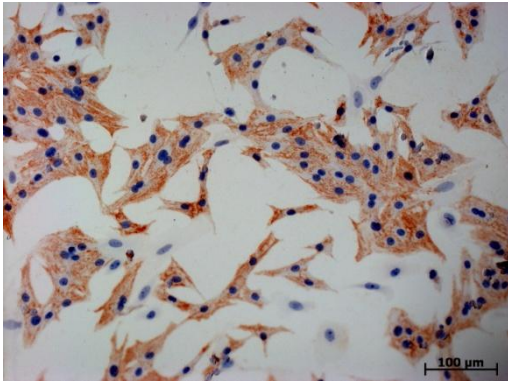


Estrogen receptor in human mammalian gland - rabbit monoclonal, AmpliStain™ R1-HRP (75R-1062)

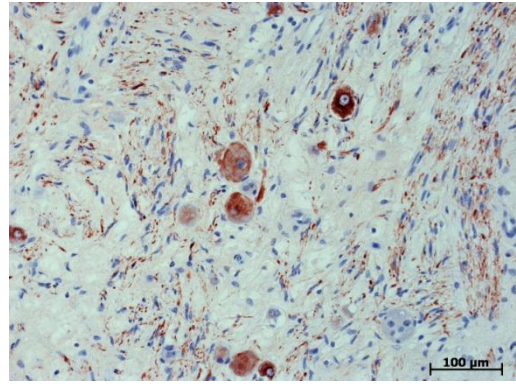


Ki-67 in a tonsil - mouse monoclonal, AmpliStain™ M1-HRP (75R-1061)

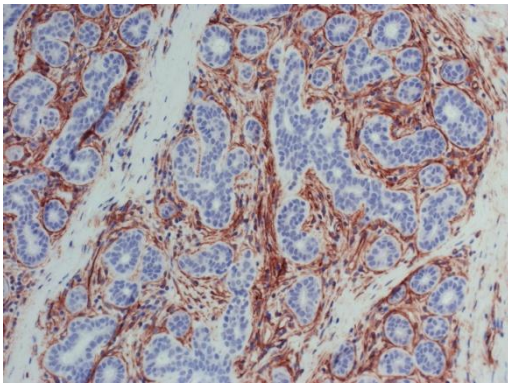




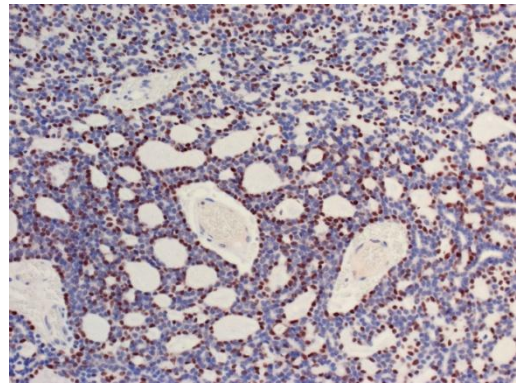
Desmin - rabbit monoclonal, AmpliStain™ R1-HRP  
(75R-1062)



Neurofilament protein - rabbit monoclonal,  
AmpliStain™ R1-HRP (75R-1062)



CD34 - mouse monoclonal, AmpliStain™ M1-HRP  
(75R-1061)



P63 - mouse monoclonal, AmpliStain™ M1-HRP  
(75R-1061)