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| Clone | EP138 |
| Source | Rabbit Monoclonal |
| Cat # | PR212-6ml RTU PR212-3ml RTU  CR212-0.1ml Conc CR212-0.5ml Conc HAR212-6ml RTU HAR212-3ml RTU |
| Regulatory Status | IVD |

IgG4 (EP138)

**Intended Use:**

This antibody is intended for use to qualitatively identify IgG4 antigen by light microscopy in formalin fixed, paraffin embedded tissue sections using immunohistochemical detection methodology. Interpretation of any positive or negative staining must be complemented with the evaluation of proper controls and must be made within the context of the patient’s clinical history and other diagnostic tests. A qualified pathologist must perform evaluation of the test.

**Summary and Explanation:**  
  
Human IgG4, one of four subclasses of IgG, contains a gamma 4 heavy chain and a hinge region that is shorter than that of IgG1. No allotypes have been detected on the heavy chains of IgG4. Its two primary effector functions are activating complements and binding to the FcgR of effector cells to initiate phagocytosis.

Human IgG4 accounts for less than 6% of the total IgG serum level. Recent studies show that serum levels and immunohistochemistry staining with IgG4 antibody is a useful diagnosis marker for IgG4- related sclerosing diseases.

A new concept of IgG4-related systemic disease (ISD) has been established recently. The ISD is characterized by elevated serum IgG4 levels and extensive IgG4+ plasma cell infiltrate in pancreas and/or in other organs, including peripancreatic tissue, bile duct, gallbladder, portal area of the liver, gastric mucosa, colonic mucosa, salivary glands, lymph nodes, and bone marrow. Immunohistochemistry analysis of IgG4 is useful for identifying ISD.

**Isotype:** Rabbit IgG

**Immunogen:**A synthetic peptide corresponding to residues in the hinge region of Human IgG4. It does not   
 cross-react with IgG1, IgG2, or IgG3.

**Reagent Provided:   
 Concentrated format:** Antibody to IgG4 is diluted in antibody diluent, with 1% bovine   
 serum albumin (BSA) and 0.05% sodium azide (NaN3). Recommended dilutions:   
 1:50 – 1:100.The antibody dilution and protocol may vary depending on   
 the specimen preparation and specific application. Optimal conditions should be   
 determined by individual laboratory.

**Pre-diluted format:** PathnSitu ready to use antibodies are pre tittered to optimal staining   
 conditions. Further dilution may loose the activity and may yield to sub   
 optimal staining.

**Storage Recommendations:** Store at 2°-8°C. Do not use after expiration date provided on the vial.

**Staining Recommendations:   
 Antigen Retrieval Solution:** Use **Tris-EDTABuffer(PathnSitu Cat # PS009)** as antigen retrieval   
 solution Heat Retrieval Method: Retrieve sections under steam pressure   
 for 15 min using PathnSitu’s MERS (Multi Epitope Retrieval System) then   
 allow solution to cool for 10 minutes then transfer tissue sections/slides to   
 distilled water.

**Primary Antibody:**  Cover the tissue sections with primary antibody and incubate for 30   
 min at room temperature when used PathnSitu PolyExcel Detection   
 System.

**Detection System:** Refer to PathnSitu PolyExcel detection system protocol or manufacturer’s detection kit staining protocol when used other vendor detection system.

**Cellular Localization:** Cytoplasm

**Positive Control:** Tonsil

**Troubleshooting:** Follow the antibody specific protocol recommendations according to data sheet provided. If unusual results occur, contact PathnSitu Technical Support at 040-2701 5544 or techsupport@pathnsitu.com.

**Limitations and Warranty:** There are no warranties, expressed or implied, which extend beyond this   
 description. PathnSitu is not liable for property damage, personal injury, or   
 economic loss caused by this product.

**Bibliography:**  1. Kamisawa T*, et al.*: *World J Gastroenterol*2008, 14:3948-3955

2. Kanno A*, et al.*: *Pancreas* 2005, 31:420-423  
3. Zhang L*, et al.*: *Mod Pathol*2007, 20:23-28  
4. Kamisawa T*, et al.*: *J Gastroenterol*2003, 38:982-984