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| Clone | EP302 |
| Source | Rabbit Monoclonal |
| Cat # | PR224-6ml RTU PR224-3ml RTU  HAR224-6ml RTU HAR224-3ml RTU CR224-0.1ml Conc CR224-0.1ml Conc |
| Regulatory Status | IVD |

**ALK (EP302)**

**Intended Use:**

This antibody is intended for use to qualitatively identify ALK 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:**   
  
Anaplastic lymphoma kinase (ALK) is a receptor tyrosine kinase of the insulin receptor superfamily. ALK is typically expressed at low levels in regions of the developing central and peripheral nervous system.

ALK may be activated in cancer through multiple mechanisms. The most common mechanism is through formation of a fusion protein from chromosomal translocations, as in the case of anaplastic large cell lymphoma (ALCL) and inflammatory myofibroblastic tumors. ALK may also be amplified through mutation, as in neuroblastomas. Various solid tumors, such as non-small cell lung carcinoma (NSCLC) and brain cancers were also found to aberrantly express ALK.

ALK staining is present within both the nucleus and cytoplasm, and are positive in about 60% of ALCL. ALK protein expression by tumor cells is an independent prognostic factor that predicts a favorable outcome.

**Isotype:** Rabbit IgG

**Immunogen:** A synthetic peptide corresponding to residues of human NPM-ALK fusion protein

**Reagent Provided:   
  
 Concentrated format:** Antibody to ALK 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-EDTA or Citrate Buffer** **(PathnSitu Cat # PS009 or PS007)** 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 and Nucleus

**Positive Control:** Anaplastic large cell lymphoma

**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. Cessna MH, et al.: Mod Pathol. 2002, 15(9):931-8.   
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**ALK, EP302 antibody has been created by Epitomics Inc., using Epitomics’ proprietary rabbit monoclonal antibody technology covered under Patent No.’s 5,675,063 and 7,402,409.**