|  |  |
| --- | --- |
| Clone | EP299 |
| Source | Rabbit Monoclonal |
| Cat # | PR227-6ml RTU PR227-3ml RTU  CR227-0.1ml Conc CR227-0.5ml Conc HAR227-6ml RTU HAR227-3ml RTU |
| Regulatory Status | IVD |

SALL4 (EP299)

**Intended Use:**

This antibody is intended for use to qualitatively identify SALL4 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:**   
  
The Sal-like protein 4, SALL4 is a zinc finger transcription factor located on chromosome 20q13.13-13.2. It is essential during development by maintaining embryonic stem cell pluripotency and self-renewal. Mutations in SALL4 lead to acro-renal-ocular and Okihiro syndromes, a disorder of the eyes and abnormalities of bones in the arms and hands.

Recently, SALL4 has been identified as a novel sensitive diagnostic marker for germ cell tumors. Strong SALL4 staining was observed in all seminoma/dysgerminoma/germinomas, embryonal carcinomas, and yolk sac tumors, yielding 100% sensitivity for these malignancies. Compared with α-fetoprotein and glypican-3, SALL4 demonstrated superior sensitivity in detecting yolk sac tumors. Focal SALL4 staining was also observed in choriocarcinomas (66-71%) and teratomas (50-64%).

In non-germ cell tumors, SALL4 is expressed in all cases of acute myeloid leukemia, and majority of Precursor B-cell acute lymphoblastic lymphomas (79%). In a large immunohistochemical study of >3200 cases, SALL4 was also detected in ~20% of cases of ovarian, urothelial and gastric adenocarcinomas, and <5% in mammary, colorectal, prostatic and squamous cell carcinomas.

**Isotype:** Rabbit IgG

**Immunogen:** A synthetic peptide corresponding to residues of human SALL4 protein.

**Reagent Provided:   
 Concentrated format:** Antibody to SALL4 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 Buffer** **(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:** Nuclear

**Positive Control:** Yolksac Tumor, Germcell tumor

**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. Cao D, et al.: Cancer. 2009, 115(12):2640-51.   
 2. Cui W, et al.: Mod Pathol. 2006, 19(12):1585-92.   
 3. Forghanifard MM, et al.: J Biomed Sci. 2013, 20:6.   
 4. Mei K, et al.: Mod Pathol. 2009, 22(12):1628-36.   
 5. Miettinen M, et al.: Am J Surg Pathol. 2014, 38(3):410-20.

**SALL4, EP299 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.**