Bio SB is excited to introduce over 50 new IVD biomarkers for use in Immunohistochemistry.

All antibodies are available in concentrate and convenient Tinto Predilute formats to meet your laboratory needs.
# 2016 New Antibodies for Immunohistochemistry

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<th>Antibody</th>
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<th>Application</th>
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<tr>
<td><strong>Adipophilin / ADRP, MMab (BSB-91)</strong></td>
<td></td>
<td>Adipophilin is suitable for immunostaining and is helpful in the identification of intracytoplasmic lipids, as seen in sebaceous lesions. It is especially helpful in identifying intracytoplasmic lipid vesicles in poorly differentiated sebaceous carcinomas in challenging cases such as small pericoronal biopsy specimens. <strong>Application:</strong> Melanoma &amp; Skin Cancer</td>
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<tr>
<td>ALK, RMaB (EP301)</td>
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<td>ALK recognizes a human p80 protein, identified as a hybrid of the Anaplastic Lymphoma Kinase (ALK) gene and the Nucleophosmin (NPM) gene resulting from the t(2;5)(p23;q35) translocation found in a third of Large-Cell Lymphomas. ALK-1 is detected in 60% of Anaplastic Large-Cell Lymphomas and has proven to indicate a better prognosis in the ALK-1 (+) group. <strong>Application:</strong> Lymphomas, Lung Cancer</td>
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<tr>
<td><strong>Amyloid A, RMab (EP335)</strong></td>
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<td>The Amyloid A immunostaining detects tissue deposition of serum Amyloid A protein, an acute phase reactive protein. It is positive in AA Amyloidosis and familial Mediterranean fever. Recently, SAA has also been investigated as a potential marker for neoplastic activity. SAA concentrations have been reported to be a marker of poor prognosis, elevated in patients with advanced stages of cancer and those with a malignant disease. <strong>Application:</strong> Kidney &amp; Urothelial Cancer, Rejection &amp; Autoimmunity</td>
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<td><strong>B7-H3, RMab (RBT-H3)</strong></td>
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<td>B7-H3 expression has been reported in several human cancers indicating an additional function of B7-H3 as a regulator of antitumor immunity. B7-H3 has been shown in recent years to be of clinical significance in different types of cancer. Another aspect of B7-H3, that so far has received little interest, is its role in non-immunological systems. It has been demonstrated that knockdown of B7-H3 in melanoma and breast cancer cells results in both increased chemosensitivity and decreased metastatic potential. <strong>Application:</strong> Melanoma &amp; Skin Cancer, Prostate Cancer, Gall Bladder &amp; Pancreatic Cancer, Breast Cancer</td>
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<tr>
<td><strong>bcl6, RMab (EP278)</strong></td>
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<td>Antibodies to the bcl-6 protein stain the germinal center cells in lymphoid follicles, follicular cells and interfollicular cells in Follicular Lymphoma, Diffuse Large B-Cell Lymphomas, Burkitt's Lymphoma, and the majority of the Reed-Sternberg cells in Nodular Lymphocyte-Predominant Hodgkin's Disease. bcl-6 is also useful in identifying neoplastic cells in cases of nodular Lymphocyte-Predominant Hodgkin's Disease. <strong>Application:</strong> Hodgkin’s and NHD Lymphoma, Lymphoma, Gall Bladder and Pancreatic Cancer</td>
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<td><strong>BRAF V600E, RMab (RM8)</strong></td>
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<td>BRAF-V600E mutation are present in 57% of Langerhans cell histiocytosis patients. The V600E mutation is a likely driver mutation in 100% of cases of hairy cell leukemia. High frequency of BRAF V600E mutations have been detected in ameloblastoma, a benign but locally infiltrative odontogenic neoplasm. <strong>Application:</strong> Melanoma &amp; Skin Cancer, Hodgkin’s &amp; NH Lymphoma, Colon &amp; GI Cancer, Thyroid &amp; Parathyroid Cancer, Lung Cancer, Leukemia &amp; Histiocytic</td>
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<td><strong>C4d, RMab (EP273)</strong></td>
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<td>C4d can be detected in peritubular capillaries in both chronic renal allograft rejection as well as hyperacute rejection, acute vascular rejection, acute cellular rejection, and borderline rejection. It has been shown to be a significant predictor of transplant kidney graft survival and is an aid in treating acute rejection. <strong>Application:</strong> Kidney &amp; Urothelial Cancer, Rejection &amp; Autoimmunity</td>
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<td><strong>CD5, RMab (RED1)</strong></td>
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<td>CD5 is a T-cell marker that also reacts with a range of neoplastic B-cells, e.g., B-cell Chronic Lymphocytic Leukemia (B-CLL), B-cell Small Lymphocytic Lymphoma (BSLL), and Mantle Cell Lymphoma. CD5 is expressed in T-lymphocyte subsets and is modulated during cellular activation; however, it does not react with granulocytes or monocytes. <strong>Application:</strong> Leukemia &amp; Histiocytic, Lymphoma</td>
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<td><strong>CD8, RMab (EP334)</strong></td>
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<td>CD8 is a T-cell marker for the detection of cytotoxic suppressor cells of blood lymphocytes. CD8 is also detected on NK cells, most thymocytes, a subpopulation of null cells and bone marrow cells. This antibody is used to distinguish between reactive and neoplastic T-cells. <strong>Application:</strong> Leukemia &amp; Histiocytic, Lymphoma, Melanoma &amp; Skin Cancer</td>
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<tr>
<td><strong>CD15, RMab (EP272)</strong></td>
<td></td>
<td>CD15 is expressed in patients with Hodgkin’s Disease, some B-cell Chronic Lymphocytic Leukemias, Acute Lymphoblastic Leukemias, and most Acute Non-Lymphocytic Leukemias. It is also called Lewis x. A positive reaction for CD15 combined with a negative reaction for CD45 and other B and T lineage markers provides support for Reed-Sternberg cells found in Hodgkin’s disease. <strong>Application:</strong> Hodgkin’s and NHD Lymphoma, Lung Cancer</td>
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**2016 New Antibodies for Immunohistochemistry**

**CD103 / ITGAE, RMab (EP206)**

CD103 is useful in identifying Hairy Cell Leukemia, which is positive for this marker in most cases in contrast to other hematologic malignancies which are negative for CD103, with the exception of Splenic Marginal Zone Lymphoma, which rarely expresses CD103. The high sensitivity of anti-CD103 for Hairy Cell Leukemia makes this marker valuable when distinguishing this malignancy from other B-cell neoplasms.

**Application:** Leukemia & Histiocytic, Lymphoma, Ovarian Cancer, Colon & GI Cancer

**CD105, RMab (EP274)**

CD105 is highly expressed in endothelial cells during tumor angiogenesis and inflammation, with weak or negative expression in vascular endothelium of normal tissues. CD105 is a more specific and sensitive marker for tumor angiogenesis than CD31, as it labels only newly-formed blood vessels and may serve as a prognostic marker for Prostate Adenocarcinoma, and cancers of the lung, stomach, breast, and brain. CD105 may serve as a target for anti-angiogenesis therapy.

**Application:** Endothelial, Prostate Cancer, Breast Cancer, Colon & GI Cancer, Kidney & Urothelial Cancer, Lung Cancer

**CD163 / CD152, MMab (BSB-88)**

CD163 is expressed exclusively on the cell surface of human monocytes and macrophages that evolve predominantly in the late phase of inflammation, and is, therefore, very useful for macrophage-phenotyping. Positive staining can be seen in the skin (histiocytes), gut, Kupffer cells, a few alveolar macrophages, the main population of macrophages in the placenta, and in varying degrees in macrophages in inflamed tissue including tumor tissue, depending on the inflammatory stage.

**Application:** Leukemia & Histiocytic, Sarcoma & Soft Tissue, Melanoma & Skin Cancer

**COX-2, RMab (EP293)**

COX-2 overexpression has been associated with increased microvascular density, and VEGF protein expression in head and neck Squamous Cell Carcinomas and is a poor prognostic indicator in this entity as well. The overexpression of COX-2 along with increased angiogenesis and GLUT-1 expression is significantly associated with gallbladder carcinomas. COX-2 overexpression has also been suggested as a poor prognostic indicator in Carcinomas of the Colon, Breast, Pancreas, and Adenocarcinomas of the Lung.

**Application:** Colon & GI Cancer

**CTLA-4 / CD152, MMab (BSB-88)**

CTLA-4 is found to be aberrantly produced and found in the serum of patients with active SLE. Germline haploinsufficiency of CTLA-4 leads to CTLA-4 deficiency or loss of function and is therefore, very useful for macrophage-phenotyping. Positive staining can be seen in the skin (histiocytes), gut, Kupffer cells, a few alveolar macrophages, the main population of macrophages in the placenta, and in varying degrees in macrophages in inflamed tissue including tumor tissue, depending on the inflammatory stage.

**Application:** Endothelial, Prostate Cancer, Breast Cancer, Colon & GI Cancer, Kidney & Urothelial Cancer, Lung Cancer

**Cytokeratin 16, RMab (EP297)**

CK16 expression has been described in neoplasms of multiple tissues. Progressive CK16 abundance and intensity were observed with increased grade of severity of cervical intraepithelial neoplasia lesions. Furthermore, 10% of invasive carcinomas were diffusely or focally positive. In keratocystic odontogenic tumors, CK16 was observed in 79% of cases. These observations support CK16 as a marker of hyperproliferation.

**Application:** Rejection & Autoimmunity, Melanoma & Skin Cancer, Cervical Cancer, Head & Neck Cancer

**Desmoglein-3, RMab (EP306)**

Desmoglein 3 has been cited as a superior marker for Lung Squamous Cell Carcinomas, and helps distinguish lung squamous cell carcinoma cases from lung adenocarcinoma. Studies have also shown that a panel consisting of Desmoglein-3 utilized with Napsin A can be a useful Immunohistochemical marker for differentiation of lung squamous cell carcinoma and adenocarcinoma from other subtypes. Lung cases that are typically positive for Desmoglein 3 tend to have a poor clinical outcome.

**Application:** Lung Cancer, Rejection & Autoimmunity, Head & Neck Cancer, Melanoma & Skin Cancer

**DOG-1, RMab (EP332)**

DOG1 identifies the vast majority of both c-Kit negative and PDGFRA mutated GIST cases that may still benefit from imatinib mesylate (Gleevec), an inhibitor of the kit tyrosine kinase. In addition, DOG1 immunoreactivity is seen in fewer cases of mesenchymal and epithelial tumors, and melanomas when compared with c-Kit. The use of this highly-sensitive and specific novel marker should increase the accuracy of GIST diagnosis.

**Application:** GIST, Head & Neck Cancer, Sarcoma & Soft Tissue, Colon & GI Cancer

**FOXA1 / HNF, RMab (EP277)**

FOXA1 in breast cancer is highly correlated with ERα+, GATA3+, and PR+ protein expression as well as endocrine signaling. FOXA1 absence in ERα+ breast cancer might identify ERα cancers that are resistant to endocrine therapy. In ERα− breast cancer, FOXA1 is highly correlated with improved disease free survival and GATA3. Expression in ERα− cancers may identify a subset of tumors that is responsive to other endocrine therapies such as androgen receptor antagonist treatment.

**Application:** Breast Cancer, Prostate Cancer

**FOXO1, RMab (EP290)**

FOXO1 is broadly expressed in different types of cells with high level of expression in lymphoid cells and non-Hodgkin's lymphomas. The O-class of FOX proteins such as FOXO1 and FOXO3, which are downstream effectors of the FTOH tumor suppressor, inhibits the transcriptional activity of either full-length AR or constitutively active splice variants of AR in a direct or indirect manner in Prostate Cancer. Translocation of FOXO1 gene with PAX5 has been associated with alveolar rhabdomyosarcoma.

**Application:** Hodgkin’s & NHL Lymphoma, Cervical Cancer, Prostate Cancer, Sarcoma & Soft Tissue
**2016 New Antibodies for Immunohistochemistry**

### FOXP3, RMab (EP340)

FOXP3 is a protein involved in immune system responses. In regulatory T cell model systems, the FOXP3 transcription factor occupies the promoters of many important for regulatory T-cell function, and may repress transcription of key genes following stimulation of T cell receptors. Alterations in numbers of regulatory T-cells – in particular those that express FOXP3 – are found in a number of disease states. Patients with tumors have a local relative excess of FOXP3 positive T cells which inhibits the body's ability to suppress the formation of cancerous cells.  
**Application:** Breast Cancer, Ovarian Cancer, Prostate Cancer, Hodgkin's and NHD Lymphoma

### Glutamine Synthetase, MMab (GS-6)

GS immunoreactivity has been seen in a majority of hepatocellular carcinoma (HCC). A panel composed of antibodies against HSP70, GPC3, and GS has been proposed to be very useful in distinguishing between dysplastic and early malignant hepatocellular nodules arising in cirrhosis. Staining of hepatocellular lesions with anti-GS antibody have been useful in the differential diagnosis of focal nodular hyperplasia (FNH), hepatic adenoma (HCA), and dysplastic nodules, and low grade hepatocellular carcinoma.  
**Application:** Liver Cancer

### Helicobacter Pylori, RMab (EP279)

Helicobacter pylori is a helix-shaped Gram-negative bacterium. It contains a hydrogenase which can be used to obtain energy by oxidizing molecular hydrogen (H2) produced by intestinal bacteria. It produces oxidase, catalase, and urease. Strains of H. pylori that produce high levels of two proteins, vacuolating toxin A (VacA) and the cytotoxin-associated gene A (CagA), appear to cause greater tissue damage than those that produce lower levels or that lack these genes completely. 
**Application:** Infectious Diseases, Colon & GI Cancer

### hGAL / GCET2, RMab (EP316)

The HGAL protein has been shown to be expressed in the cytoplasm of germinal center B lymphocytes and in B cell lymphomas of germinal center derivation. HGAL is an ideal marker for the detection of Germinal Center-derived B-cell Lymphomas and has the highest overall sensitivity of detecting Follicular Lymphoma. HGAL has been identified in gene-expression profiling studies of Diffuse Large B-Cell Lymphoma (DLBCL). Expression of HGAL protein identifies a subset of classic Hodgkin Lymphoma of Germinal Center derivation with improved survival.  
**Application:** Lymphoma, Hodgkin’s & NH Lymphoma

### HPV16, MMab (CAMVIR-1)

All known papillomavirus types infect a particular body surface, typically the skin or mucosal epithelium of the genitals, anus, mouth, or airways. Some papillomavirus types can cause cancer in the epithelial tissues they inhabit, cancer is not a typical outcome of infection. Papillomaviruses have been associated with the development of cervical cancer, penile cancer and oral cancers. An association with vulvar cancer and uterine carcinoma with squamous differentiation in patients with neurogenic bladder has also been reported. 
**Application:** Cervical Cancer, Head & Neck Cancer, Infectious Diseases

### HSP-27, MMab (G3.1)

HSP27 immunohistochemistry is a useful tool for the identification of CIN and cervical squamous cell carcinoma, and is a good complement to p16. HSP27 has been demonstrated to be overexpressed in cervical intraepithelial neoplasia (CIN) and squamous cell carcinoma of the cervix using immunohistochemistry. When both anti-HSP27 and anti-p16 were assessed using IHC, both the sensitivity and specificity were improved. 
**Application:** Cervical Cancer, Breast Cancer, Prostate Cancer

### IgD, RMab (EP173)

IgD antibody reacts with surface immunoglobulin IgD delta chains. This antibody is useful when identifying Leukemias, Plasmacytomas, and B-cell lineage derived from Lymphomas, specifically Marginal Zone Lymphoma. 
**Application:** Lymphomas, Hodgkin’s & NH Lymphoma, Rejection & Autoimmunity

### IMP-3 / 1GF2BP3, RMab (EP286)

IMP3 plays a significant role in the progression of NSCLC, and that it may potentially be used as an independent biomarker for prognostic evaluation. IMP3 may be a useful diagnostic marker in the assessment of endometrial cancers and their precursor lesions, particularly when the amount of available tissue material is limited and a concern of type II cancer arises. High frequency of IMP3 expression is present in decidualized endometrial stroma of gestational endometrium and chorionic villi in early pregnancy. 
**Application:** Gall Bladder & Pancreatic Cancer, Lung Cancer, Kidney & Urothelial Cancer, Melanoma & Skin Cancer, Endometrial & Genital Cancer, Colon & GI Cancer

### Islet 1 / ISL1, RMab (EP283)

Islet-1 produces a strong nuclear staining in the islets of normal pancreas and tumor cells of the pancreatic neuroendocrine tumors. Islet-1 has been found to be a reliable marker of pancreatic endocrine tumors and metastasis. TTF1 is very rarely expressed in well-differentiated gastroentero-pancreatic endocrine tumors. Therefore, the panel of Islet-1 CDX2, and TTF1 and they may be useful for examining metastasis of well-differentiated endocrine carcinomas of unknown origin. 
**Application:** Gall Bladder & Pancreatic Cancer

### MDM2, MMab (BSB-64)

Detection of MDM2 protein overexpression by IHC can be used to diagnose WDLPS and DDLPS. Immunohistochemical expression of MDM2 and CDK4 is specific and provides sensitive markers for the diagnosis of Low-grade Osteosarcomas, helping to differentiate them from benign fibrous and fibro-osseous lesions, particularly in cases with atypical radio-clinical presentation and/or limited biopsy samples. 
**Application:** Sarcoma & Soft Tissues, Breast Cancer
2016 New Antibodies for Immunohistochemistry

**MUC4, MMab (8G7)**

MUC4 has been found to play various roles in the progression of cancer, particularly due to its signaling and anti-adhesive properties which contribute to tumor development and metastasis. An abnormal expression of MUC4 has been reported in various carcinomas of the colon, pancreas, breast, and ovaries. MUC4 is helpful in differentiating lung adenocarcinoma (positive) from malignant mesothelioma (negative). MUC4 expression is also detected in the glandular component of biphasic synovial sarcomas.

**Application:** Colon & GI Cancer, Gall Bladder & Pancreatic Cancer, Ovarian Cancer, Lung Cancer, Cervical Cancer, Sarcoma & Soft Tissue

**Maspin, MMab (BSB-92)**

Maspin has been shown in primary breast cancer to be regulated by wild-type p53, defining a new category of molecular targets of p53 that have the potential to negatively regulate tumor invasion and metastasis. Loss of Maspin expression correlates with increased tumor aggressiveness and poor prognosis in advanced breast and prostate cancer. In contrast, Maspin has been shown to be overexpressed in pancreatic, ovarian, thyroid, gastric, lung, bladder, breast, skin and colon cancer.

**Application:** Breast Cancer, Prostate Cancer, Colon & GI Cancer, Gall Bladder & Pancreatic Cancer, Lung Cancer

**Mycobacterium Tuberculosis, RPab (Polyclonal)**

*M. tuberculosis* is characterized by caseating granulomas containing Langhans giant cells, which have a “horseshoe” pattern of nuclei. The diagnosis of tuberculosis by immunohistochemistry can be used to detect the mycobacterial antigen on formalin-fixed tissue biopsies and it’s consider fast, sensitive, and a highly specific method for establishing the etiological diagnosis of tuberculosis in histologic specimens.

**Application:** Infectious Diseases, Cytopathology

**Neutrophil Elastase, RMab (EP223)**

Neutrophil elastase can be used as an additional marker to differentiate the involvement of neutrophilic myeloid cells. This marker is useful for differentiating leukemic infiltrates of myeloproliferative processes in lymph nodes and other organs from undifferentiated carcinomas and/or histiocytic sarcomas or large cell lymphomas. Neutrophil elastase is a useful aid for classification of acute myeloid leukemia and extramedullary myeloid cell tumors.

**Application:** Leukemia & Histiocytic

**NKX2.2, RMab (EP336)**

NKX2.2 was recently reported as a valuable marker for Ewing’s sarcoma. NKX2.2 expression is tightly correlated with EWS-FLI1 expression, a critical downstream target that is required for the cancerous behavior of Ewing’s sarcoma. NKX2.2 labels 93% of Ewing’s sarcoma and only a small subset (14/130) of non-Ewing tumors, demonstrating a sensitivity of 93% and specificity of 89%. Staining with NKX2.2 can aid in the differential diagnosis of small round cell tumors.

**Application:** Sarcoma & Soft Tissue

**NKX3.1, RMab (EP356)**

NKX3.1 has been established as a marker for identifying metastatic tumors. NKX3.1-positive prostate carcinoma cells exhibit nuclear staining. NKX3.1 has also been found to be expressed in Invasive Ductal Carcinomas (IDC) and Invasive Lobular Carcinomas (ILC) of the breast. NKX3.1 has a high specificity and sensitivity for prostate adenocarcinomas and can be used to help distinguish between Prostate Carcinoma and Urothelial Carcinomas.

**Application:** Prostate Cancer, Breast Cancer, Carcinoma of Unknown Primary Site

**Osteonectin/SPARC, MMab (BSB-93)**

Overexpression of Osteonectin is reported in many human cancers such as breast, prostate and colon. By immunohistochemistry, strong staining of the cancer cells was observed in addition to extensive Osteonectin immunoreactivity in surrounding fibroblasts and in the extracellular matrix. In metastatic tissues, strong immunoreactivity was observed in fibroblasts and in extracellular matrix surrounding metastatic cancer cells.

**Application:** Breast Cancer, Prostate Cancer, Colon & GI Cancer, Gall Bladder & Pancreatic Cancer

**OX-40 / CD134, MMab (BSB-90)**

Preclinical studies have shown that OX40 agonists increase antitumor immunity and improve tumor-free survival by increasing T and B cell responses to reporter antigen immunizations, led to preferential upregulation of OX40 on CD4(+) FoxP3(+) regulatory T cells in tumor-infiltrating lymphocytes, and increased the antitumor reactivity of T and B cells in patients with melanoma.

**Application:** Rejection & Autoimmunity, Melanoma & Skin Cancer

**PAX-6, RMab (EP341)**

PAX6 labels neuroendocrine cells and derived tumor cells and is helpful in identification of neuroendocrine tumors. A recent study showed that PAX6 and PAX8 were positive in the majority of neuroendocrine tumors originated from pancreas, duodenum, and colon. Additionally, Elevated PAX6 and SOX11 expression correlates with poor outcome in large cell neuroendocrine carcinomas and small cell lung cancer.

**Application:** Gall Bladder & Pancreatic Cancer, Ovarian Cancer, Colon & GI Cancer, Lung Cancer, Carcinomas of Unknown Primary Site

**PAX-8, RPab (Polyclonal)**

PAX 8 is expressed in the thyroid (and associated carcinomas), non-ciliated mucosal cells of the fallopian tubes and simple ovarian inclusion cysts, as well as in a high percentage of ovarian serous, endometrioid, and clear cell carcinomas, but only rarely in primary ovarian mucinous adenocarcinomas. PAX-8, combined with organ-system-specific markers such as uroplakin, mammmaglobin, and TTF-1 can be a very useful panel to determine the primary site of invasive micropapillary carcinomas of ovary from bladder, lung, and breast.

**Application:** Kidney & Urothelial Cancer, Ovarian Cancer, Thyroid & Parathyroid Cancer, Carcinomas of Unknown Primary Site
### 2016 New Antibodies for Immunohistochemistry

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<td><strong>PAX-8, RMab (EP298)</strong>&lt;br&gt;PAX-8 is expressed in the thyroid (and associated carcinomas), non-ciliated mucosal cells of the fallopian tubes and simple ovarian inclusion cysts, as well as in a high percentage of ovarian serous, endometrioid, and clear cell carcinomas, but only rarely in primary ovarian mucinous adenocarcinomas. PAX-8, combined with organ system-specific markers such as uroplakin, mammaglobin, and TTF-1 can be a very useful panel to determine the primary site of invasive micropapillary carcinomas of ovary from bladder, lung, and breast.</td>
<td>Kidney &amp; Urothelial Cancer, Ovarian Cancer, Thyroid &amp; Parathyroid Cancer, Carcinomas of Unknown Primary Site</td>
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<tr>
<td><strong>PD-1/CD279, RMab (EP239)</strong>&lt;br&gt;Expression of PD-L1 on tumors is correlated with reduced survival in esophageal, pancreatic and other types of cancers, highlighting the relevance of exploring the PD-1 pathway as a target for immunotherapy. Studies have found that PD-1 is expressed on most T-cells and a small subset of B-cells in the light zone of germinal centers, but not elsewhere in the tonsil. PD-1 is a new marker of Angioimmunoblastic Lymphoma and suggests a unique cell of origin for this neoplasm.</td>
<td>Lymphoma, Hodgkin’s and NHD Lymphoma</td>
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<td><strong>PDX1, RMab (EP139)</strong>&lt;br&gt;PDX1 expression has been identified in Pancreatic Ductal Adenocarcinomas and endocrine neoplasms. Among pancreatic neoplasms, PDX1 consistently labeled &gt;50% of the tumor cells. PDX1 expression is variable in invasive ductal adenocarcinoma and precursor lesions of ductal adenocarcinomas. Solid pseudopapillary neoplasms do not express PDX1. Besides increased expression of PDX1 in Pancreatic cancer, it also has also been reported in tumors of the colon and prostate, indicating that PDX1 may serve as a biomarker in patients with these malignancies.</td>
<td>Gall Bladder &amp; Pancreatic Cancer, Colon &amp; GI Cancer, Prostate Cancer</td>
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<td><strong>Prostein/P501S, RMab (ZR-9)</strong>&lt;br&gt;Immunohistochemistry for P501S is a sensitive and highly specific marker for identifying prostate metastases. The large majority of metastatic prostatic adenocarcinomas are Prostein/P501S positive (99%). A small subset of metastatic prostatic adenocarcinoma shows significant differences in staining intensity and extent for PSA and Prostein/P501S and, therefore, the combined use of these markers may result in increased sensitivity for detecting prostatic origin.</td>
<td>Prostate Cancer, Carcinomas of Unknown Primary Site</td>
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<tr>
<td><strong>PTEN, MMab (6H2.1)</strong>&lt;br&gt;PTEN is one of the most commonly lost tumor suppressors in human cancer. Frequent genetic inactivation of PTEN occurs in glioblastoma, endometrial cancer, and prostate cancer; and reduced expression is found in many other tumor types such as lung and breast cancer. In breast and prostate cancer, loss of PTEN expression has been shown to correlate positively with advanced stage. Furthermore, PTEN mutation also causes a variety of inherited predispositions to cancer.</td>
<td>Breast Cancer, Endometrial &amp; Genital Cancer, Neural &amp; Neuroendocrine Cancer, Prostate Cancer</td>
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<tr>
<td><strong>S100A6, RMab (EP313)</strong>&lt;br&gt;S100A6 is a cytoplasmic and nuclear protein abundantly expressed in fibroblasts and epithelial cells. It is also detected in some neurons, glial cells, smooth muscle, myocytes, and lymphocytes. In pancreatic cancer, elevation of S100A6 RNA and protein has been observed in malignant cells. Nuclear S100A6 expression is associated with reduced survival time in pancreatic cancer patients. S100A6 has also been reported as possible diagnostic marker of papillary thyroid carcinoma.</td>
<td>Kidney &amp; Urothelial Cancer, Gall Bladder &amp; Pancreatic Cancer, Colon &amp; GI Cancer, Thyroid &amp; Parathyroid Cancer, Gall Bladder and Pancreatic Cancer, Liver Cancer; Colon &amp; GI Cancer</td>
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<tr>
<td><strong>SALL4, MMab (6E3)</strong>&lt;br&gt;SALL4 expression is often correlated with worse survival and poor prognosis such as in HCC, or with metastasis such as in endometrial cancer, colorectal carcinoma, and esophageal squamous cell carcinoma. SALL4 demonstrates 100% sensitivity and stains more than 90% tumor cells in all intratubular germ cell neoplasia, seminomas, dysgerminomas, embryonal carcinomas, and yolk sac tumor (YST).</td>
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<td><strong>SALL4, RMab (EP299)</strong>&lt;br&gt;SALL4 expression is often correlated with worse survival and poor prognosis such as in HCC, or with metastasis such as in endometrial cancer, colorectal carcinoma, and esophageal squamous cell carcinoma. SALL4 demonstrates 100% sensitivity and stains more than 90% tumor cells in all intratubular germ cell neoplasia, seminomas, dysgerminomas, embryonal carcinomas, and yolk sac tumor (YST).</td>
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<td><strong>SATB2, RMab (EP281)</strong>&lt;br&gt;SATB2 has been identified as a tissue-specific protein when screening protein expression patterns in human and cancerous tissues, with expression restricted to the lower gastrointestinal tract. SATB2 is a good marker for identifying a carcinoma of colorectal origin when working on a tumor of unknown primary. Another potential utility of SATB2 is to identify neuroendocrine neoplasms/carcinomas of the colon and rectum because SATB2 is usually negative in other neuroendocrine neoplasms of the GI tract, pancreas, and lung.</td>
<td>Colon &amp; GI Cancer</td>
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<tr>
<td><strong>SMAD4/DPC4, MMab (BSB-63)</strong>&lt;br&gt;Approximately 55% of pancreatic cancers bear deletions or mutations in SMAD4/DPC4. Patients undergoing surgical resection of their pancreatic adenocarcinoma, survival of patients whose tumors expressed SMAD4 protein was significantly longer. This SMAD4 survival benefit persisted after adjustment for prognostic factors including tumor size, margin status, lymph node status, pathological stage, blood loss, and use of adjuvant chemoradiotherapy.</td>
<td>Gall Bladder and Pancreatic Cancer, Liver Cancer; Colon &amp; GI Cancer</td>
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STAT6, RPab

STAT6 is a highly sensitive and specific immunohistochemical marker for SFT and can be helpful to distinguish this tumor type from histologic mimics. STAT6 is amplified in a subset of dedifferentiated Liposarcoma, resulting in STAT6 protein expression that can be detected by immunohistochemistry and may be a potential pitfall in the differential diagnosis of dedifferentiated Liposarcoma and Solitary Fibrous Tumor.

Application: Sarcoma & Soft Tissues, Lung Cancer

TFE3, RMab (EP285)

TFE3 is the most sensitive and specific immunohistochemical marker for the RCC Xp11.2 translocation, which reflects over-expression of the resulting fusion proteins relative to native TFE3. The Xp11.2 renal cell carcinoma has been recently established as a tumor affecting 15% of RCC patients

Application: Kidney & Urothelial Cancer, Sarcoma & Soft Tissue, Carcinoma of Unknown Primary Site

Treponema Pallidum, RPab

T. pallidum is a motile spirochaete that is generally acquired by close sexual contact, entering the host via breaches in squamous or columnar epithelium. The organism can also be transmitted to a fetus by transplacental passage during the later stages of pregnancy, giving rise to congenital syphilis. T. pallidum can be also evidenced by Immunohistochemistry in up to 90% of the samples with the bacteria located in the epidermis and the upper dermis of formalin-fixed paraffin-embedded tissues.

Application: Infectious Diseases

Uroplakin III, RMab (EP321)

UPIII expression is strongly associated with lower tumor grades and lack of UPIII expression in urothelial tumors of the upper urinary tract is associated with much higher rates of metastases. Five-year specific survival is much worse for UPIII negative tumors (54%) than for UPIII positive tumors (100%). Apparently UPIII expression is a better indicator for the malignant potential of the tumor than the grade of the tumor.

Application: Kidney & Urothelial Cancer

SOX-9, RMab (EP317)

Amplification of the chromosomal region of SOX9 has been found in Prostate, Neuroblastoma, Medulloblastoma, Breast and Ovarian Cancer. Although staining is predominantly nuclear, cytoplasmic SOX9 may serve as a valuable prognostic marker for Invasive Ductal Carcinomas and Metastatic Breast Cancer. Additionally, SOX9 upregulation has been associated with higher tumor stage and grade, and overexpression has been recognized as an independent prognostic marker for decreased survival in Colorectal Cancer, NSCLC and HCC patients.

Application: Colon & GI Cancer, Lung Cancer, Prostate Cancer, Gall Bladder & Pancreatic Cancer, Liver Cancer, Ovarian Cancer

Antibody Presentations

Tinto Predilutes

- 3 mL Tinto Predilute (30 tests)
- 7 mL Tinto Predilute (70 tests)
- 15 mL Tinto Predilute (150 tests)

- No need for optimization.
- Compatible with biotin or polymer based detection systems.
- Tinto Predilutes diluted in proprietary protein blocker/stabilizer.

Concentrated

- 0.1 mL Concentrate
- 0.5 mL Concentrate
- 1 mL Concentrate

- Cost effective solution.
- Compatible with biotin or polymer based detection systems.
- Can be optimized to meet the needs of each laboratory.
- Concentrated antibodies diluted in proprietary protein blocker/stabilizer.
Our PolyDetector HRP Blue Substrate-Chromogen kit is suitable for use with HRP detection systems and allows for the demonstration of cell antigens or nucleic acids in paraffin-embedded tissues, cryostat sections, cytosmears, and cell preparations. This chromogen is particularly useful in tissues where there endogenous melanin is present and DAB Chromogen may not be suitable.

New Human Normal, Cancer Tissue and Cell Line Microarrays

11 & 23 - Core Normal Human TMA’s
11 & 23 - Core Cancer Human TMA’s
11 & 23 - Core Cancer Cell Line Microarrays
9 - Core Infectious Disease Cell Line Microarray

Abbreviations:

MMab = Mouse Monoclonal Antibody
RMab = Rabbit Monoclonal Antibody
RPab = Rabbit Polyclonal Antibody

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