

# **Novel Soft Tissue Markers**





#### **ERG** (EP111)

ERG is an important novel marker for the identification of vascular neoplasms due its strong and specific nuclear expression in endothelial cells. ERG is strongly expressed in Kaposi sarcoma, which is usually associated with HHV-8, as well as other vascular tumors such as hemangioendothelioma and

| Description        | Cat. No. |
|--------------------|----------|
| 0.1 ml concentrate | 434R-14  |
| 0.5 ml concentrate | 434R-15  |
| 1 ml concentrate   | 434R-16  |
| 1 ml predilute     | 434R-17  |
| 7 ml predilute     | 434R-18  |

angiosarcoma. ERG has shown to be a valuable addition to an endothelial panel that includes Factor VIII, CD31, CD34, and D2-40.

#### **MUC4** (8G7)

MUC4 or Mucin 4 is a transmembranous glycoprotein. MUC4 overexpression has been reported in low-grade fibromyxoid sarcoma (LGFMS). Strong, diffuse cytoplasmic staining for MUC4 has been identified in cases of sclerosing epithelioid fibrosarcoma whereas all other epithelioid soft tissue tumorsincluding clear cell sarcoma, epithelioid sarcoma, epithelioid hemangiosarcoma, PEComa and melanoma—were negative.

| Description               | Cat. No. |
|---------------------------|----------|
| 0.1 ml concentrate        | 406M-14  |
| 0.5 ml concentrate        | 406M-15  |
| 1 ml concentrate          | 406M-16  |
| 1 ml predilute            | 406M-17  |
| 7 ml predilute            | 406M-18  |
| 5 Positive Control Slides | 406S     |

## **ALDH1A1** (44)

ALDH1A1 aids in the identification of solitary fibrous tumors. It is primarily expressed in the epithelium of brain, eye, kidney, liver, testis, as well as neural and hematopoietic stem cells. When incorporated into an IHC panel, ALDH1A1 can aid in the differentiation between solitary fibrous tumor (SFT), hemangiopericytoma (HPC), meningioma, and synovial sarcoma.

| Description               | Cat. No. |
|---------------------------|----------|
| 0.1 ml concentrate        | 400M-14  |
| 0.5 ml concentrate        | 400M-15  |
| 1 ml concentrate          | 400M-16  |
| 1 ml predilute            | 400M-17  |
| 7 ml predilute            | 400M-18  |
| 5 Positive Control Slides | 400S     |



### **TLE1** (1F5)

Mouse monoclonal TLE1 (1F5) is a highly sensitive and specific biomarker for the diagnosis of synovial sarcoma in the group of otherwise unclassifiable high-grade sarcomas. TLE1 is rare to absent in other soft tissue tumors including malignant peripheral nerve sheath tumors and pleomorphic sarcoma.

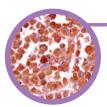


#### **TFE3** (MRQ-37)

Alveolar soft part sarcoma (ASPS) is a relatively uncommon soft tissue sarcoma, which predominantly affects younger patients. The hallmark of ASPS is a chromosomal rearrangement at 17q25 and Xp11.2, engendering an ASPSCR1–TFE3 fusion gene responsible for an aberrant transcription factor presumably enabling pathogenesis. Because diagnosing ASPS can be problematic due to histologic overlap with other tumors, particularly in small biopsies, anti-TFE3 (MRQ-37) can be useful, as it has been shown to be highly specific and sensitive for identifying this translocation in ASPS.

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| Description               | Cat. No.     |
| 0.1 ml concentrate        | 401M-14      |
| 0.5 ml concentrate        | 401M-15      |
| 1 ml concentrate          | 401M-16      |
| 1 ml predilute            | 401M-17      |
| 7 ml predilute            | 401M-18      |
| 5 Positive Control Slides | 4015         |

| Description               | Cat. No. |
|---------------------------|----------|
| 0.1 ml concentrate        | 354R-14  |
| 0.5 ml concentrate        | 354R-15  |
| 1 ml concentrate          | 354R-16  |
| 1 ml predilute            | 354R-17  |
| 7 ml predilute            | 354R-18  |
| 5 Positive Control Slides | 354S     |



## Cathepsin K (3F9)

Cathepsin K is a protease whose expression in osteoclasts is regulated by microphthalmia transcription factor. Anti-cathepsin K aids in identifying Xp11.2 translocation neoplasms, including renal cell carcinoma and alveolar soft part sarcoma, to distinguish them from their histologic mimics.<sup>1</sup>

SOX-10 is diffusely expressed in schwannomas and neurofibromas. SOX-10 presence was not identified in any other mesenchymal and epithelial tumors except for myoepitheliomas and diffuse astrocytomas. SOX-10 expression is seen in sustentacular cells of pheochromocytomas and paragangliomas, and occasionally carcinoid tumors from various

| Cat. No. |
|----------|
| 402M-14  |
| 402M-15  |
| 402M-16  |
| 402M-17  |
| 402M-18  |
| 402S     |
|          |

| Description               | Cat. No. |
|---------------------------|----------|
| 0.1 ml concentrate        | 383R-14  |
| 0.5 ml concentrate        | 383R-15  |
| 1 ml concentrate          | 383R-16  |
| 1 ml predilute            | 383R-17  |
| 7 ml predilute            | 383R-18  |
| 5 Positive Control Slides | 3835     |

Description

0.1 ml concentrate

0.5 ml concentrate

5 Positive Control Slides

1 ml concentrate

Inquire for details.

1 ml predilute

7 ml predilute

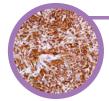


## **MyoD1** (EP212)

organs, but is not seen in the tumor cells.<sup>2</sup>

SOX-10 (EP268)

Rhabdomyosarcomas (RMS) are the most frequent malignant soft tissue neoplasms of childhood. Less differentiated RMS resemble other small blue round-cell tumors, and for these less differentiated RMS cases, immunohistochemistry (IHC) is required either for definitive diagnosis or as an essential factor in the differential diagnosis. Normal mature skeletal muscle does not express MyoD1 protein. MyoD1 is expressed in myoblasts before differentiation while myogenin has post-differentiation functions. Anti-MyoD1 immunostaining identifies cells committed to myogenesis in their earliest phase; thus, it is a better biomarker for less differentiated RMS.



#### Transgelin (2A10C2)

Anti-transgelin positivity is abundant in vascular and visceral smooth muscle. Transgelin is considered an early marker of smooth muscle differentiation and may be an early and sensitive marker for the onset of transformation. In some cases, differentiating smooth muscle within malignant lesions can be challenging, therefore the use of myogenic markers such as transgelin may serve to define smooth muscle differentiation in soft tissue tumors.

References: 1) Martignoni G, et al. Mod Pathol. 2011 Oct; 24(10):1313-9.

2) Nonaka D, et al. Am J Surg Pathol. 2008; 32:1291-1298.

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Cat. No.

386R-14

386R-15

386R-16

386R-17

386R-18

386S



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