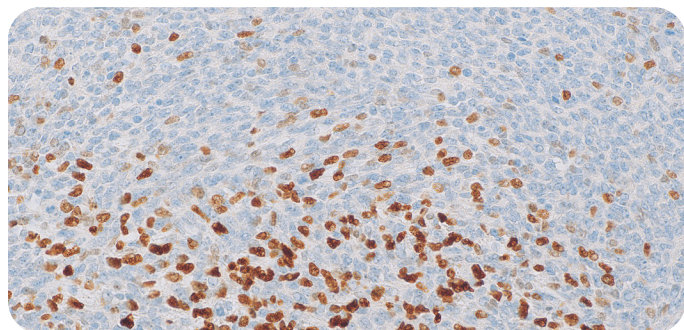


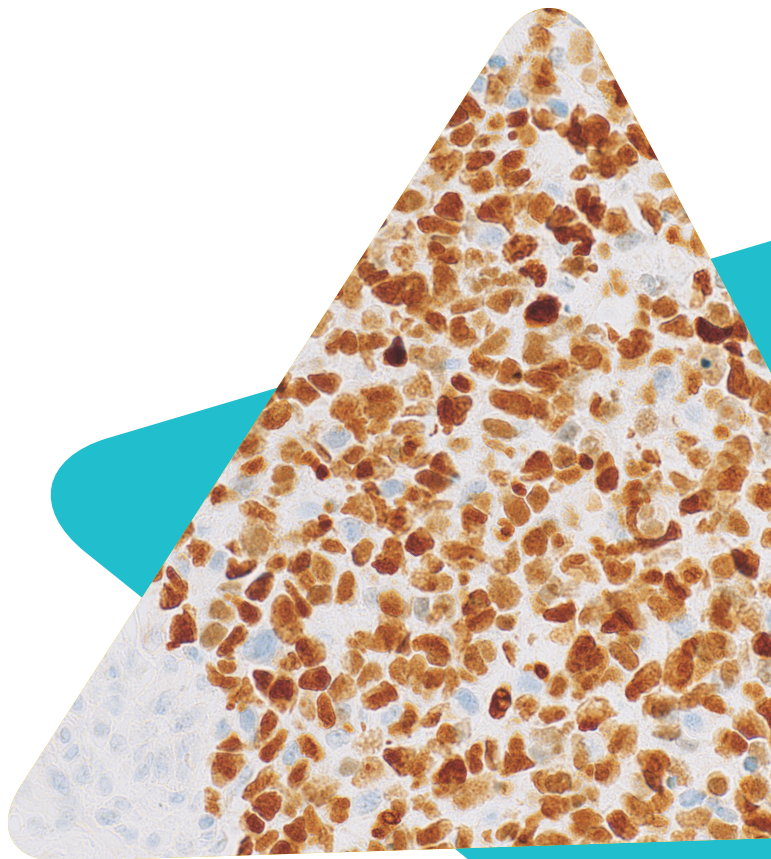
## Cell Marque™ Tissue Diagnostics

**PAX-7 (MRQ-69)****Mouse Monoclonal Antibody**

The paired-box (PAX) family of proteins are key transcriptional regulators involved in early critical development.<sup>1</sup> The PAX-7 transcription factor has important functions in mammalian myogenesis and early neural development, with a particularly crucial role in specification and self-renewal of skeletal muscle tissue.<sup>2,3</sup> The expression of PAX-7 is highly restricted in normal adult tissues as demonstrated by nuclear immunoreactivity only being identified in rare, scattered satellite cells of the skeletal muscle and absent in both visceral smooth muscle and cardiac muscle as well as in a broad anatomical range of other non-neoplastic tissues. The assessment of soft tissue tumors and small round cell tumors is a persistent diagnostic challenge because of overlapping morphological features and insufficient molecular characterization in these groups of neoplasms. A high frequency of strong PAX-7 nuclear expression has been identified predominantly in rhabdomyosarcomas, preferentially in the embryonal subtype, and Ewing's sarcoma, with reactivity being absent in related malignancies such as leiomyosarcoma, lymphoblastic lymphoma, neuroblastoma, carcinoid tumor, gastrointestinal stromal tumor, and small cell lung carcinoma. Immunohistochemical detection of PAX-7 protein can be used as a tool in distinguishing embryonal rhabdomyosarcoma and Ewing's sarcoma from histologic mimics.<sup>4,5</sup>



PAX-7 (MRQ-69) on rhabdomyosarcoma

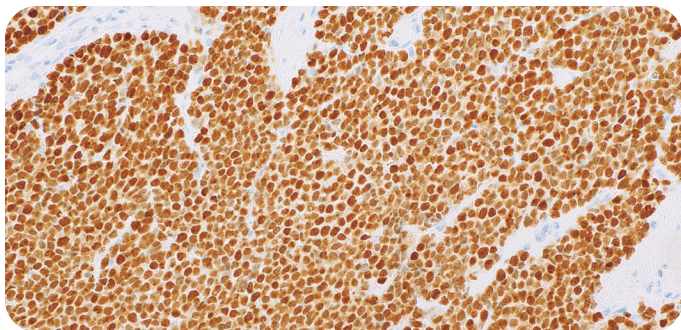


PAX-7 (MRQ-69) on rhabdomyosarcoma

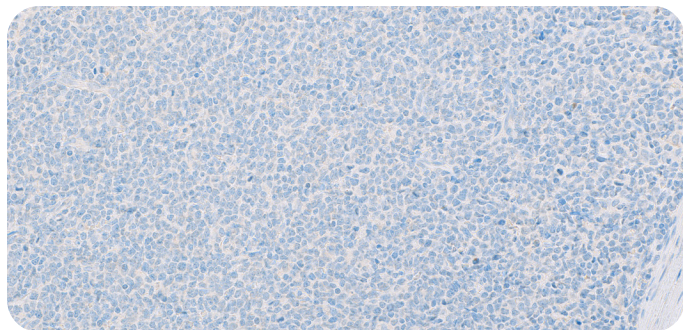
**Ordering Information**

Description	Cat No.
0.1 mL concentrate	481M-94
0.5 mL concentrate	481M-95
1.0 mL concentrate	481M-96
1.0 mL predilute	481M-97
7.0 mL predilute	481M-98





PAX-7 (MRQ-69) on Ewing's Sarcoma



PAX-7 (MRQ-69) on lymphoblastic lymphoma

#### Intended Use:

PAX-7 (MRQ-69) Mouse Monoclonal Antibody is intended for laboratory use in the detection of the PAX-7 protein in formalin-fixed, paraffin-embedded tissue stained in qualitative immunohistochemistry (IHC) testing. This product is not a stand-alone diagnostic, and cannot be used for diagnosis, treatment, prevention, or mitigation of disease.

#### Product Information:

**Visualization:** Nuclear

**Controls:** Rhabdomyosarcoma, Ewing's sarcoma

**Dilution Range:** 1:100-1:200

**Associated Specialty:** Pediatrics, Soft Tissue Pathology

#### References:

1. Blake, JA et al. PAX genes: Regulators of lineage specification and progenitor maintenance. *The Company of Biologists*. 2014; 141:737-751.
2. Kawakami, A et al. Distributions of PAX6 and PAX7 proteins suggest their involvement in both early and late phases of chick brain development. *Mechanisms of Development*. 1997; 66:119-130.
3. Olguin, HC et al. PAX-7 up-regulation inhibits myogenesis and cell cycle progression in satellite cells: a potential mechanism for self-renewal. *Dev Biol*. 2004; 275(2):375-88.
4. Charville, GW et al. PAX7 expression in rhabdomyosarcoma, related soft tissue tumors, and small round blue cell neoplasms. *Am J Surg Path*. 2016; 40(10):1305-1315.
5. Toki, S et al. PAX7 immunohistochemical evaluation of Ewing sarcoma and other small round cell tumours. *Histopathology*. 2018; 73:645-652.

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