FLI-1 (MRQ-1)

For In Vitro Diagnostic Use (IVD)
English: Instructions For Use

Presentation
Anti-FLI-1 is a mouse monoclonal antibody from supernatant diluted in tris buffered saline, pH 7.3-7.7, with protein base, and preserved with sodium azide.

Applications
Ewing sarcoma/peripheral primitive neuroectodermal tumor (ES/PNET) is a rare primary tumor of the bone/soft tissue that resembles other undifferentiated tumors. The differential diagnosis of undifferentiated tumors of the soft tissue includes blastemal Wilms tumor, rhabdoid tumor, neuroblastoma, lymphoma, clear cell sarcoma, small cell carcinoma, synovial sarcoma (SS), neuroblastoma, desmoplastic small round cell tumor (DSRCT), and ES/PNET. It is important to correctly classify these tumors for appropriate treatment. The most common primitive renal tumor, Wilms tumor, responds well to a standard regimen of multiagent chemotherapy, whereas renal ES/PNET tends to be a high-stage, aggressive neoplasm that requires more extensive therapy .

The FLI-1 gene and FLI-1 protein are best known for their critical role in the pathogenesis of ES/PNET. More than 85% of ES/PNET are characterized by the translocation t(11;22)(q24;q12) that results in the fusion of the ews gene on chromosome 22 to the FLI-1 gene on chromosome 11. FLI-1 is a member of the ETS (erythroblastosis virus-associated transforming sequences) family of DNA-binding transcription factors and is involved in cellular proliferation and tumorigenesis. FLI-1 is normally expressed in endothelial cells and in hematopoietic cells, including T lymphocytes. The immunohistochemical detection of FLI-1 protein has been shown in two recent studies to be valuable in the discrimination of ES/PNET from most of its potential mimics, with the notable exception of lymphoblastic lymphoma.

The FLI-1 gene has also recently been shown to play an important role in the embryologic development of blood vessels. Expression of FLI-1 protein in adult endothelial cells in all types of blood vessels (arterial, venous, and lymphatic) has previously been shown both in our previous work and in that of Nilsson et al.

Folpe et al. found FLI-1 to be a highly sensitive (92%) and, with regards to the cases evaluated in this study, specific (100%) marker of both benign and malignant vascular tumors. The "absolute specificity" of FLI-1 is of course lower, given its expression in ES/PNET and lymphomas. FLI-1 expression appears to be the first reliable nuclear marker of endothelial differentiation. In particular, Folpe et al. found that FLI-1 reliably distinguished epithelioid forms of angiosarcoma from two important mimics, epithelioid sarcoma and carcinoma.

Assoc. products: WT-1, CD99, Synaptophysin, Chromogranin A, CK AE1/AE3

Reactivity	Paraffin, frozen
Control	Ewings Sarcoma/PNET
Visualization	Nuclear
Stability	Up to 36 months; store at 2-8°C
Isotype	IgG_{2b}

The immunoglobulin concentration of the reagent appears on the product label.

Antibody color does not affect performance

Description	Cat. No.	Dilution/Comments
0.1 ml, concentrate	254M-14	1:25 - 1:100*
0.5 ml, concentrate	254M-15	1:25 - 1:100*
1 ml, concentrate	254M-16	1:25 - 1:100*
1 ml, prediluted	254M-17	Ready to use
7 ml, prediluted	254M-18	Ready to use
Positive control slides	254S	5 slides per pack

P prediluted
C concentrate

*The dilutions set forth above are estimates; actual results may differ because of variability in methods and protocols. Validation of antibody performance/protocol is the responsibility of the end user.

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Preparation and Pretreatment
1. Cut 3-4 µm section of formalin-fixed paraffin-embedded tissue and place on positively charged slides; dry overnight at 58°C.
2. Deparaffinize, rehydrate, and epitope retrieve; the preferred method is the use of Heat Induced Epitope Retrieval (HIER) techniques using Cell Marque's Trilogy™ in conjunction with a pressure cooker. The preferred method allows for simultaneous deparaffinization, rehydration, and epitope retrieval. Upon completion, rinse with 5 changes of distilled or deionized water.
3. If using HRP detection system, place slides in peroxide block for 10 minutes; rinse. If using AP detection system, omit this step.

Recommended Protocol for Staining at Room Temperature Using CytoScan™ BSA Detection System
1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the link and incubate for 10 minutes; rinse.
3. Apply the label and incubate for 10 minutes; rinse.
4. Apply ample amount of chromogen and incubate for 1 - 10 minutes; rinse.
5. Dehydrate and coverslip.

Recommended Protocol for Staining at Room Temperature Using PolyScan™ Polymer Detection System
1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the PolyScan™ Polymer Rabbit/Mouse Detection System for 30 minutes; rinse.
3. Apply ample amount of chromogen and incubate for 1 - 10 minutes; rinse.
4. Dehydrate and coverslip.

References
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2. Kuroda N, Takahashi T, Moriki T, Okanoue Y, Mizobuchi H, Miyazaki E, Hayashi Y, Lee GH. Askin tumor with metastasis to the scalp: a histochemical, immunohistochemical and ultrastructural study. Med Mol Morphol. 2006 Dec;39(4):221-5. Epub 2006 Dec 21.
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