

Spotlight On:

Caveolin-1 (2297)

Epithelioid mesothelioma is a rare malignancy of the outer lining of the lungs and abdominal cavity. Because of the location of this cancer, the diagnosis of epithelioid mesothelioma is dependent on a combination of clinical and radiologic findings combined with pleural/peritoneal fluid cytology and/or a pleural/peritoneal biopsy. The histology of mesothelioma may be ambiguous, creating a complication in making a definitive differential diagnosis between epithelioid mesothelioma and lung and/or other carcinomas. Immunohistochemistry plays an important role in supplementing morphology to provide pathologists a proteomic tool for classification of the malignancy. A panel of antibodies is required for differentiating epithelioid mesothelioma from lung and/or other carcinomas due to the variable sensitivity or specificity of commonly used markers. Antibodies with high sensitivity and specificity are constantly in demand to improve the diagnostic panel.

Caveolin-1 is a 22kDa protein expressed by some mesenchymal cells. It is the primary structural component of caveolae, vesicular invaginations of the cell membrane. Recent studies have tested caveolin-1 in panels for differentiating epithelioid mesothelioma from lung adenocarcinoma. Caveolin-1 showed 100% sensitivity and 92.5% specificity for epithelioid mesothelioma, making it equivalent or preferential to other known mesothelioma markers such as calretinin and D2-40, according to the study by Amatya VJ, et al.¹ Caveolin-1 has

also been shown to participate in the tumor formation and metastasis of Ewing's sarcoma/primitive neuroectal tumor (PNET).^{2,3}

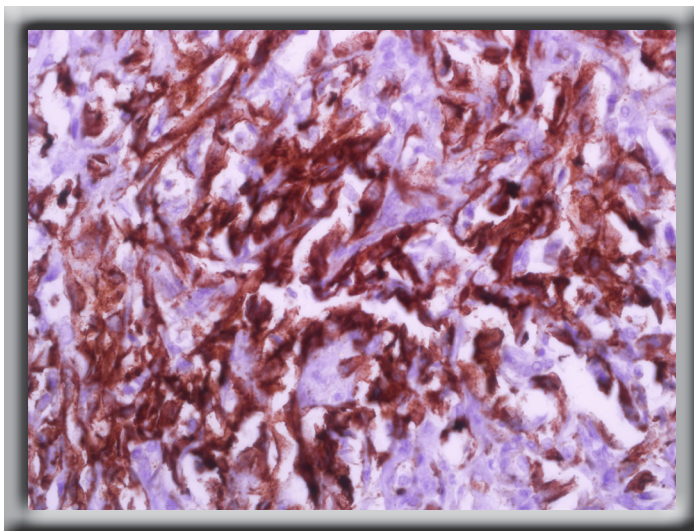
Benefits of caveolin-1:

- Published sensitivity of 100% and specificity of 92.5% for epithelioid mesothelioma
- Superior or comparable to calretinin and D2-40 in the detection of epithelioid mesothelioma, as stated in literature
- Can be used in the identification of Ewing's sarcoma/PNET

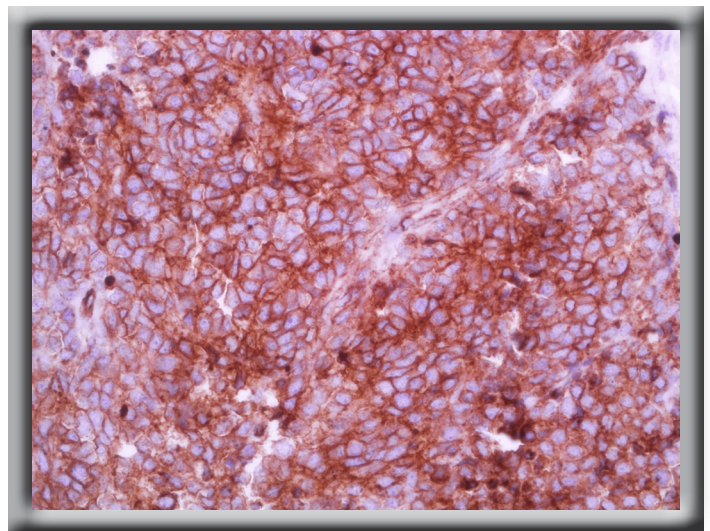
1. Amatya VJ, et al. Histopathology. 2009 Jul; 55(1):10-9.
2. Sáinz-Jaspeado M, et al. Mol Cancer Res. 2010 Nov; 8(11):1489-500.
3. Tirado OM, et al. Cancer Res 2006; 66(20):9937-47.

Ordering Information:

0.1 ml concentrate	412M-14
0.5 ml concentrate	412M-15
1 ml concentrate.....	412M-16
1 ml predilute.....	412M-17
7 ml predilute.....	412M-18
5 positive control slides	412S



Malignant mesothelioma strongly expresses caveolin-1 in cytoplasm.



Caveolin-1 antibody stains Ewing's sarcoma cells in a diffuse and cytoplasmic pattern.