

## MUC4 (8G7)

**P**ancreatic ductal adenocarcinoma (PDA) comprises 85% of all pancreatic malignancies, and is the fourth leading cause of cancer related deaths in the United States. A biopsy or a cytology sample is taken from the pancreas and tested to determine the diagnosis. Morphologically, PDA may resemble autoimmune pancreatitis. Pancreatic cancer has a poor prognosis, whereas autoimmune pancreatitis is a benign mimic that is treatable. Antibodies that can aid in differential distinction are a valued resource in pathology labs.

MUC4 is a member of the mucin family and is expressed by epithelial cells. MUC4 is overexpressed in PDA and intraductal papillary mucinous neoplasms, but is negative in benign pancreas and autoimmune pancreatitis. MUC4 has been published as having 77% sensitivity and 78% specificity in the differentiation of PDA from chronic pancreatitis.<sup>1</sup> MUC4 has an additional utility in soft tissue tumor diagnosis as it is highly sensitive and specific for low-grade fibromyxoid sarcoma (LGFMS). In one study, MUC4 stained 100% of LGFMS but stained none of soft tissue perineuriomas, myxofibrosarcomas, cellular myxomas, solitary fibrous tumors, low-grade malignant peripheral nerve sheath tumors, desmoid fibromatosis, neurofibromas, schwannomas, dermatofibrosarcoma protuberans, myxoid liposarcomas, and extraskeletal myxoid chondrosarcomas.<sup>2</sup> It has been reported that MUC4 can also be expressed in sclerosing epithelioid fibrosarcoma and synovial sarcoma (glandular components).<sup>2</sup> Recent studies showed MUC4 expression in almost all ovarian carcinoma and primary

peritoneal carcinoma (96% - 99%), but absence of MUC4 expression in almost all diffuse malignant peritoneal mesothelioma.<sup>3</sup>

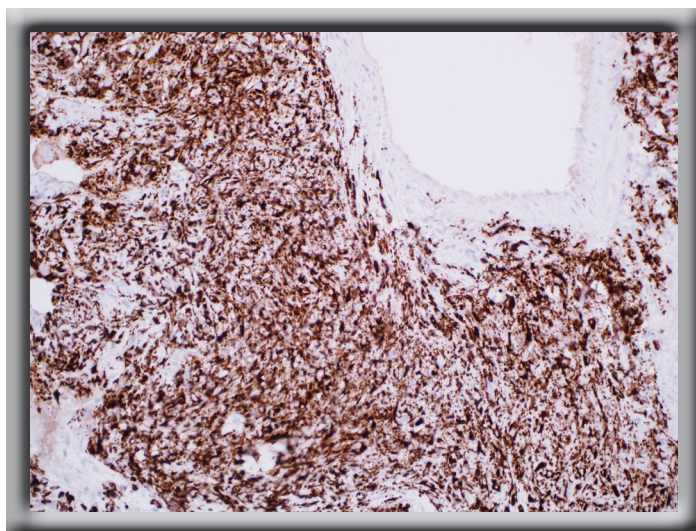
### Benefits of MUC4:

- *In vitro* diagnostic
- Differentiates pancreatic ductal adenocarcinoma from benign pancreas and chronic pancreatitis
- Detects low-grade fibromyxoid sarcoma and differentiates LGFMS from soft tissue mimics
- Separates ovarian carcinoma and primary peritoneal carcinoma from peritoneal mesothelioma

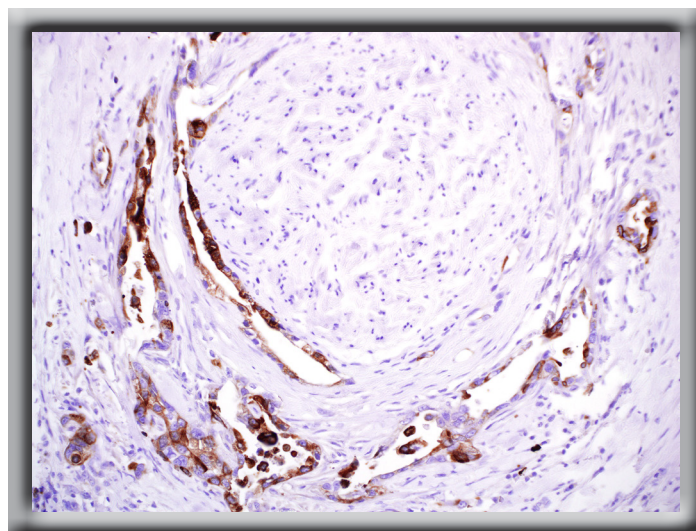
1. Arch Pathol Lab Med. 2007; 131:556-62.
2. Am J Surg Pathol. 2011; 35:733-41.
3. Ultrastruct Pathol. 2008; 32:227-40.

### Ordering Information

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



*MUC4 antibody highlights tumor cells of low-grade fibromyxoid sarcoma diffusely and strongly.*



*MUC4 antibody immuno-reacts with pancreatic ductal adenocarcinoma cells. Note paraneural invasion by MUC4 positive tumor cells.*