Monoclonal Antibodies to Osteopontin

Osteopontin (OPN) is a multifunctional protein involved in diverse biological processes, including but not limited to physiological and pathological mineralization, inflammation, cell mediated immune response, autoimmune disorders and tissue repair. High levels of circulating OPN and OPN fragments have been implicated as a prognostic indicator of various cancers. Maine Biotechnology Services, Inc. (MBS), in collaboration with Maine Medical Center Research Institute (MMCRI) and the University of Southern Maine (USM), developed six anti-human OPN monoclonal antibodies.

- MAB193P through MAB196P recognize the N-terminal fragment of OPN
- MAB197P recognizes the C-terminal fragment of OPN
- MAB222P is specific for the MMP cleavage site (DSVVYG) of OPN
- All six clones recognize native, purified OPN from human breast milk in indirect and sandwich ELISA
- MAB194P and MAB197P recognize OPN in smooth muscle cells by western blot
- Multiple matched pairs available for the quantification of native OPN

(Figure) An extensive ELISA matched pair study was conducted for all six monoclonal antibodies to Osteopontin. Using the native OPN at 2 μg/ml, MAB222P pairs with MAB193P in either configuration, but achieves higher signal when used as the capture antibody with MAB193P as tracer. MAB194P as capture and MAB193P as tracer also show good potential for an OPN quantitative assay. An irrelevant pair of antibodies was used as a negative control.

References
