

Soluble Mesothelin-Related Peptides (MESOMARK)

Last Literature Review: October 2022 Last Update: December 2023

Mesothelioma is a rare form of cancer in which fluid accumulates in the lungs and chest cavity. Mesothelioma can also be found in the lining of the pleural cavity of the abdomen. It is primarily caused by work-related asbestos exposure, and it is estimated that 3,000 new cases are diagnosed each year in the United States. Malignant mesothelioma is an extremely aggressive disease with a poor prognosis. Soluble mesothelin-related peptides (SMRPs) are released into the bloodstream by mesothelioma cells. Measurement of SMRPs may aid in the management of patients diagnosed with epithelioid or biphasic mesothelioma.

Test Information

The MESOMARK assay is an enzyme-linked immunosorbent assay (ELISA) for the quantitative measurement of SMRPs in human serum. The MESOMARK assay measures soluble molecules that are related to the mesothelin/megakaryocyte potentiating factor (MPF) family of proteins and recognized by the monoclonal antibody OV569. The reactivity of OV569 is low for normal human tissues except for the mesothelium. Soluble members of the mesothelin/MPF family of proteins have been reported in the sera of patients with tumors of mesothelial origin.

Analytic Sensitivity

The sensitivity of the MESOMARK assay is 0.3 nM. Analytic sensitivity corresponds to the upper limit of the 95% confidence interval of the zero calibrator and represents the lowest concentration of an antigen that can be distinguished from zero.

No assay interference was observed in the presence of the following chemotherapeutic agents at the specified concentrations.

Chemotherapeutic Agents Tested for MESOMARK Interference	
Test Compound	Test Concentration
Cisplatin	1.53 mg/mL
Carboplatin	0.34 mg/mL
Alimta	1.3 mg/mL
Gemcitabine	300 µM

Limitations

- MESOMARK results should be used in conjunction with other data (eg, symptoms, results of other tests, clinical impressions, and imaging studies).
- Because SMRPs are not produced by every mesothelioma tumor, a false-negative result is possible.
- Results cannot be interpreted as absolute evidence of the presence or absence of malignant disease.

Featured ARUP Testing

[Soluble Mesothelin Related Peptides \(MESOMARK\(R\)\) 0081284](#)

Method: Quantitative Enzyme-Linked Immunosorbent Assay

Use for the quantitative measurement of soluble mesothelin-related peptides (SMRPs) in serum.

