Surfactant Protein A

**Analyte:** Surfactant Protein A

**Specimen Type:** Heparin Plasma, Inquire for additional option(s)

**Optimum Volume:** 0.5 mL *

![Temperature Options: 2-8°C, -20°C, -70°C, 6 days, N.A., N.A.]

**Reporting units:** ng/mL

**Method:** ELISA

**Biological or Clinical Significance:**

Surfactant Protein A (SP-A; surfactant-associated protein A – SFTPA; pulmonary surfactant-associated protein A – PSPA) is the major protein component of the lung surfactant in mammals. It belongs, together with SP-D (surfactant protein D), to the collectin family of proteins, whose members contain collagen-like and C-type lectin domains. The protein has a structure of six trimers. It can be found in an open or closed form depending on the other substances present in the system. Calcium ions produce the closed form.

Human SP-A is expressed primarily in the lung, mostly in alveolar type II cells and also in non-ciliated bronchial epithelial cells. SP-A has been found in various biological fluids, such as bronchoalveolar lavage fluid, sputum, serum, amniotic fluid and vaginal lavage fluid. It has also been found to be expressed in cells of the small and large intestine.

SP-A takes part in modulating the function of immune system cells, especially dendritic cells and T-cells. Several studies have shown that inflammatory mediators (e.g. TNF) are controlled by SP-A, both positively and negatively.

Changes in SP-A production in the lung or its baseline concentrations in serum might be associated with progression or mortality of idiopathic pulmonary fibrosis (IPF). Reduced levels of SP-A in alveolar fluid were also reported in other pulmonary diseases, e.g. acute respiratory distress syndrome (ARDS).

**Principle of Test Method:**

The Surfactant Protein A ELISA is a sandwich enzyme immunoassay for the quantitative
measurement of human surfactant protein A in serum, plasma (citrate, heparin), bronchoalveolar lavage fluid and amniotic fluid.

*Please contact nexelis for stability information.

References: