
Monoclonal Antibody To Rat SP-D Surfactant Protein D

Surfactant protein D (SP-D) is a Ca²⁺-dependent carbohydrate-binding protein and is structurally similar to other C-type mammalian lectins, such as conglutinin and SP-A. It has a molecular size of approximately 43kDa in its reduced state, 620kDa under non-dissociating conditions. SP-D enhances the production of oxygen radicals by rat alveolar macrophages and regulates some actions of SP-A, which is the most abundant surfactant protein. SP-D is synthesized and secreted by alveolar epithelial type II cells.

This antibody was purified from *in vitro* cell culture supernatant, not from ascites.

Product number: T-3204

Clone: VI F11

Lot: 04PO1613

TECHNICAL AND ANALYTICAL CHARACTERISTICS:

Host species, subclass: Mouse IgG1 kappa

Quantity: 200µg

Format: Affinity purified, lyophilized, packaged under nitrogen.
Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 5mg/ml bovine serum albumin (BSA) as a stabilizer and 0.05% (v/v) Kathon CG as a preservative.

Stability: Original vial: 1 year at 4° - 8°C

Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.

Applications: Tested for immunohistochemistry (IHC); has been described to work in ELISA, Western Blots.

Approximate working dilution for IHC:

Frozen sections: 0.5µg/ml (1:800) for rat frozen sections, 10-20µg/ml with human frozen sections (not validated).

Paraffin sections: Possibly reactive at 10-20µg/ml (1:20-1:40) with rat tissues (not validated).

Optimal dilutions should be determined by the end user.

Suggested positive control: Rat lung.

Please see www.bma.ch for protocols and general information.

Immunogen: Purified SP-D from rat bronchoalveolar lavage.

Antigen, epitope:	Surfactant Protein D, the epitope is localized in the lectin domain of SP-D.
Antigen distribution:	Tissue sections: alveolar type II cells, alveolar macrophages, two types of Clara cells SP-A+ and SP-A-, and extracellular deposits. Alveolar type III cells stain negative. No reaction on rat skin, colon, kidney and liver.
Specificity:	Rat: SP-D. Other species: human positive (not validated), pig negative

Selected references

Schmidt R, Markart P, Ruppert C, Wygrecka M, Kuchenbuch T, Walmrath D, Seeger W, Guenther A.: Time-dependent changes in pulmonary surfactant function and composition in acute respiratory distress syndrome due to pneumonia or aspiration. *Respir Res.* 2007 Jul 27;8:55.

Hilgendorff A, Schmidt R, Bohnert A, Merz C, Bein G, Gortner L.: Host defence lectins in preterm neonates. *Acta Paediatr.* 2005 Jun;94(6):794-9.

Griese M, Neumann M, von Bredow T, Schmidt R, Ratjen F.: Surfactant in children with malignancies, immunosuppression, fever and pulmonary infiltrates. *Eur Respir J.* 2002 Nov;20(5):1284-91.

Pan T, Nielsen LD, Allen MJ, Shannon KM, Shannon JM, Selman M, Mason RJ.: Serum SP-D is a marker of lung injury in rats. *Am J Physiol Lung Cell Mol Physiol.* 2002 Apr;282(4):L824-32.

Kasper M, Albrecht S, Grossmann H, Grosser M, Schuh D, Müller M.: Monoclonal antibodies to surfactant protein D: evaluation of immunoreactivity in normal rat lung and in a radiation-induced fibrosis model. *Exp Lung Res.* 1995 Jul-Aug;21(4):577-88.

This product contains Kathon CG as a preservative and is intended for laboratory use and research purposes only. Purchase of this product does not include authorization to reverse engineer any part thereof, nor to use it in diagnostic or therapeutic applications.