MONOCLONAL ANTIBODY TO RAT SURFACANT PROTEIN D (SP-D)  
clone VIF9

Catalog nr  HM3023-IA (lot number and expiry date are indicated on the label)

Description  
The monoclonal antibody VIF9 recognizes the rat surfactant protein D (SP-D). SP-D belongs to the collectin family. These proteins are oligomeric proteins composed of carbohydrate-recognition domains (CRD) attached to collagenous regions. They are structurally similar to the ficolins although they make use of different CRD structures: C-type lectin domain for the collectins. The anti-microbial effector mechanisms of SP-D are direct opsonization, neutralization, and agglutination. Thus limiting the infection and concurrently orchestrating the subsequent adaptive immune response. The lung is the major site of synthesis of SP-D, where the molecules are produced and secreted onto the epithelial surface by alveolar type II cells and unciliated bronchial epithelial cells. SP-D is also found in different epithelial cells of the gastrointestinal tract and in epithelial cells of exocrine glands. SP-D synthesis and secretion increase significantly after inflammatory stress. Increased amounts of SP-D in lavage and tissue, particularly in type II pneumocytes, in Clara cells and in hyperplastic goblet cells are found in inflamed lungs. The localization of SP-D in endocytic vesicles and in lysosomal granules of alveolar macrophages suggests that a receptor-mediated uptake occurs. SP-D binds to apoptotic neutrophils and enhances their clearance by alveolar macrophages. Monoclonal antibody VIF9 specific for rat surfactant protein D shows significant cross reactivity with human SP-D. Monoclonal antibody VIF9 stains paraffin sections of rat lung. It cannot be used for staining of paraffin sections of human lung. It can also be used as detection antibody for Elisa on wells coated with human SP-D.

Species  
Mouse IgG1

Formulation  
0.5 mg of 0.2 µm filtered antibody solution in PBS (exact concentration is indicated on the label), containing 0.02% sodium azide.

Application  
The monoclonal antibody VIF9 can be used for Western blotting and as detection antibody in immunoassays. Furthermore the monoclonal antibody VIF9 is useful for immunohistology on paraffin embedded sections.

Use  
For immunohistology and Western blotting dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:10.

Storage and stability  
Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.

Precautions  
For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result with the use of or derivation of this product.

References  

Also available  
HM3022  Monoclonal antibody against Rat SP-D, clone IIIH3
HM3024  Monoclonal antibody against Rat SP-D, clone IVG8
HP7002  Polyclonal antibody against Pig SP-B