Thermo SCIENTIFIC

**DATA SHEET**
Rev 012202F

# Alpha-1-Antitrypsin Ab-1

## Rabbit Polyclonal Antibody

**Cat. #RB-367-A1, or -A (0.1ml, 0.5ml, or 1.0ml )**
**Cat. #RB-367-R7 (7.0ml)** (Ready-to-Use for Immunohistochemical Staining)
**Cat. #RB-367-PCS (5 Slides)** (Positive Control for Histology)

***Description:*** alpha-1-antitrypsin (alpha-1-AT) which exists in a number of genetic variants. MM variant is the most common. Alpha-1-AT is synthesized in the liver and it acts as an inhibitor of proteases such as trypsin, elastase, chymotrypsin, collagenase, leucocytic proteases, plasmin, and thrombin, which may be released during inflammatory reactions in the lung. In the absence of alpha-1-AT, these enzymes are not inhibited and they may digest pulmonary parenchyma. Alpha-1-AT deficiency is associated with chronic obstructive lung disease (emphysema) and less frequently with hepatic cirrhosis in infants and respiratory distress of the newborn. Increase in alpha-1-AT occurs as an acute phase response to tissue necrosis and inflammation. Serum level of alpha-1-AT is elevated in rheumatoid arthritis, bacterial infections, vasculitis, and carcinomatosis.

***Species Reactivity:*** Human, Baboon, Monkey, Horse, and Mink. Does not react with cow, kangaroo, pig, goat, sheep, cat, dog, guinea pig, mouse, and chicken. Others-not known.

***Immunogen:*** Purified human serum alpha-1-AT

### *Applications and Suggested Dilutions:*

- Immunohistology (Formalin/paraffin)
  (Ab 1:100-1:200 for 30 min at RT)

* [No special pretreatment is required for staining of formalin-fixed, paraffin-embedded tissues]

The optimal dilution for a specific application under a given set of experimental conditions should be determined by the investigator.

***Positive Control:*** Tonsil.

***Cellular Localization:*** Cytoplasmic

***Supplied As:*** Purified antibody fraction from rabbit anti-serum. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide, or
Prediluted antibody which is ready-to-use for staining of formalin-fixed, paraffin-embedded tissues.

### *Storage and Stability:*

Store vial at 4°C. When stored at 2-8°C, this antibody is stable for 24 months.

### *Suggested References:*

**1.** Filie AC; et al. Modern Pathology, 1996 Sep, 9(9):888-92.
**2.** Takahashi H; et al. Analytical Cellular Pathology, 1995 Sep, 9(2):135-50.

### *Limitations and Warranty:*

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. NeoMarkers is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

### *Material Safety Data:*

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

***For Research Use Only***

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### *Additional Suggested References:*


1. Cohen C; Derose PB. Liver cell dysplasia in alpha-1-antitrypsin deficiency. Modern Pathology, 1994 Jan, 7(1):31-6.
2. Deutsch J; Becker H; Aubock L. Histopathological features of liver disease in alpha 1-antitrypsin deficiency [see comments]. Acta Paediatrica. Supplement, 1994 Feb, 393:8-12.
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7. Higashiyama M; Doi O; Kodama K; Yokouchi H; Tateishi R. An evaluation of the prognostic significance of alpha-1-antitrypsin expression in adenocarcinomas of the lung: an immuno-histochemical analysis. British Journal of Cancer, 1992 Feb, 65(2):300-2.
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12. Takahashi H; Fujita S; Tsuda N; Tezuka F; Okabe H. Immunohistochemical demonstration of alpha 1-antichymotrypsin and alpha 1-antitrypsin in salivary gland pleomorphic adenomas of children. Tohoku Journal of Experimental Medicine, 1990 Sep, 162(1):79-93.
13. Takahashi H; Tsuda N; Fujita S; Tezuka F; Okabe H. Immunohistochemical investigation of vimentin, neuron-specific enolase, alpha 1-antichymotrypsin and alpha 1-antitrypsin in adenoid cystic carcinoma of the salivary gland. Acta Pathologica Japonica, 1990 Sep, 40(9):655-64.
14. Soini Y; Miettinen M. Alpha-1-antitrypsin and lysozyme. Their limited significance in fibrohistiocytic tumors. American Journal of Clinical Pathology, 1989 May, 91(5):515-21.
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17. Tsujii T; Katayama K; Naito I; Seno S. The circulating alpha 1-antitrypsin-elastase complex attacks the elastic lamina of blood vessels. An immunohistochemical study. Histochemistry, 1988, 88(3-6):443-51.

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