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# Product Information

**Monoclonal Anti-Alpha-1-Antitrypsin (AAT)**
**Clone 1C2**
produced in mouse, purified immunoglobulin

Catalog Number **SAB4200198**

## Product Description

Monoclonal Anti-Alpha-1-Antitrypsin (AAT) (mouse IgG2b isotype) is derived from the hybridoma 1C2 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a human AAT (GeneID: 5265) recombinant protein. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-Alpha-1-Antitrypsin (AAT) recognizes human AAT. The product may be used in several immunochemical techniques including immunoblotting (~45 kDa).

Alpha-1-Antitrypsin (AAT), also named SERPINA1 (SERine Proteinase Inhibitor, clade A, member 1), is a member of the protease inhibitor (serpin) family. AAT is a major serine protease inhibitor whose targets include elastase, plasmin, thrombin, trypsin, chymotrypsin, and plasminogen activator. AAT is a glycoprotein synthesized mainly in the liver and secreted to the bloodstream. Through circulation AAT reaches the lungs where it blocks the effects of neutrophil elastase. AAT is encoded by the *SERPINA1* gene. Defects in this gene can cause emphysema or liver disease. More than 100 different genetic variants of SERPINA1 have been identified.[1-5]

## Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

## Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

Store at –20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

## Product Profile

Immunoblotting: a working antibody concentration of 1-2 µg/mL is recommended using whole extracts of human HepG2 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

## References

1. Kurachi, K., et al., *Proc. Natl. Acad. Sci. USA*, **78**, 6826-6830 (1981).
2. Ciliberto, G., et al., *Cell*, **41**, 531-540 (1985).
3. Kolarich, D., et al., *Proteomics*, **6**, 3369-3380 (2006).
4. Topic, A., et al., *Ups. J. Med. Sci.*, **114**, 228-234 (2009).
5. Kaplan, A., and Cosentino, L., *Can. Fam. Physician*, **56**, 19-24 (2010).

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