

## 32-4807: Recombinant Human Alpha-1 Antitrypsin, Active

**Alternative Name :** Alpha-1-antitrypsin, Alpha-1 protease inhibitor, Alpha-1-antiproteinase, SERPINA1, A1AT, PI, A1A, AAT, PI1, MGC9222, PRO2275, MGC23330.

### Description

Source : Rice Grain (*Oryza Sativa*). SERPINA1 Human Recombinant produced in rice is a single, non-glycosylated polypeptide chain containing 384 amino acids and having a molecular mass of 43.1 kDa. The SERPINA1 protein is purified by proprietary chromatographic techniques. SERPINA1 is secreted and is a serine protease inhibitor which its targets include elastase, plasmin, collagenase, thrombin, leucocytic proteases, trypsin, chymotrypsin, and plasminogen activator. Defects in SERPINA1 gene can cause emphysema or liver disease. Antral SERPINA1 expression is particularly induced by *H. pylori* infection. Lung and prostate cancers have shown a significant increase in SERPINA1 serum levels compared with healthy controls though breast cancers did not show a significant change. SERPINA1 is an endogenous inhibitor of serine proteases and inhibits the catalytic domain of human recombinant matriptase *in vitro*. Rise in SERPINA1 occurs as an acute phase response to tissue necrosis and inflammation. Mutations in SERPINA1 and SLC11A1 genes change the balance between elastase produced by leukocytes during phagocytosis.

### Product Info

**Amount :** 100 µg  
**Purification :** Greater than 95% as determined by SDS-PAGE.  
**Content :** SERPINA1 was lyophilized from a concentrated solution containing recombinant Albumin.  
**Storage condition :** Lyophilized SERPINA1 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SERPINA1 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Application Note

It is recommended to reconstitute the lyophilized SERPINA1 in sterile 18M-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. 3~5 mg SERPINA1 will inhibit 1 mg PPE with an activity of 10.8 units per mg protein

