

Product datasheet

Native Human alpha 1 Antitrypsin protein ab77937

Description

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<b>Product name</b>	Native Human alpha 1 Antitrypsin protein
<b>Purity</b>	> 95 % SDS-PAGE.
<b>Expression system</b>	Native
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Native
<b>Species</b>	Human

Specifications

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Our [Abpromise guarantee](#) covers the use of **ab77937** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	SDS-PAGE
<b>Form</b>	Lyophilized

Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles. Constituents: 0.492% Sodium phosphate, 1.74% Sodium chloride
<b>Reconstitution</b>	Reconstitute with distilled water. Concentration is lot specific.

General Info

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<b>Function</b>	Inhibitor of serine proteases. Its primary target is elastase, but it also has a moderate affinity for plasmin and thrombin. Irreversibly inhibits trypsin, chymotrypsin and plasminogen activator. The aberrant form inhibits insulin-induced NO synthesis in platelets, decreases coagulation time and has proteolytic activity against insulin and plasmin. Short peptide from AAT: reversible chymotrypsin inhibitor. It also inhibits elastase, but not trypsin. Its major physiological function is the protection of the lower respiratory tract against proteolytic destruction by human leukocyte elastase (HLE).
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<b>Tissue specificity</b>	Ubiquitous. Expressed in leukocytes and plasma.
<b>Involvement in disease</b>	Alpha-1-antitrypsin deficiency
<b>Sequence similarities</b>	Belongs to the serpin family.
<b>Domain</b>	The reactive center loop (RCL) extends out from the body of the protein and directs binding to the target protease. The protease cleaves the serpin at the reactive site within the RCL, establishing a covalent linkage between the carboxyl group of the serpin reactive site and the serine hydroxyl of the protease. The resulting inactive serpin-protease complex is highly stable.
<b>Post-translational modifications</b>	N-glycosylated. Differential glycosylation produces a number of isoforms. N-linked glycan at Asn-107 is alternatively di-antennary, tri-antennary or tetra-antennary. The glycan at Asn-70 is di-antennary with trace amounts of tri-antennary. Glycan at Asn-271 is exclusively di-antennary. Structure of glycans at Asn-70 and Asn-271 is Hex5HexNAc4. The structure of the antennae is Neu5Ac(alpha1-6)Gal(beta1-4)GlcNAc attached to the core structure Man(alpha1-6)[Man(alpha1-3)]Man(beta1-4)GlcNAc(beta1-4)GlcNAc. Some antennae are fucosylated, which forms a Lewis-X determinant. Proteolytic processing may yield the truncated form that ranges from Asp-30 to Lys-418.
<b>Cellular localization</b>	Secreted. Endoplasmic reticulum. The S and Z allele are not secreted effectively and accumulate intracellularly in the endoplasmic reticulum and Secreted, extracellular space, extracellular matrix.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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