

Alpha-1-Antitrypsin(plasma derived) Reference standard

Cat. No. SERPINA1-20H Lot. No. (See product label)

SPECIFICATION

Product Overview

The reference Standard for AAT is made from AAT purified from plasma, was provided by a manufacturer of therapeutic concentrates and is intended primarily for use to standardise the determination of potencies of AAT used for replacement therapy including plasma-derived, recombinant and transgenic products. The standard is also suitable for assigning total protein and antigen concentrations to AAT preparations. For antigen determinations individual laboratories should investigate the suitability of the antibody used for the material to be tested. This is particularly important when recombinant products are being tested where differences in glycosylation patterns may affect the results.

Species

Human

Description

Alpha-1-Antitrypsin (AAT) belongs to the serpin (serine proteinase inhibitor) family of inhibitors and elastase is the main physiological target. Plasma-derived therapeutic AAT products are used to treat AAT deficiency (Alpha-1), a genetic disorder identified in virtually all populations that can cause liver and lung disease in adults and children.

Usage

No attempt should be made to weigh out any portion of the freeze-dried material prior to reconstitution. This Reference Standard is intended to be a primary reference material for local calibrators and should not be used as a reagent. Ampoules should be stored at -20 °C or below (but are shipped at ambient temperatures and are stable for short periods). Before use, the ampoules should be warmed to room temperature and the contents of the ampoule should be reconstituted in 1 ml of distilled water and stored on ice for use within the same day.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Notes	This preparation is not for administration to humans. The preparation contains material of human origin, and either the final product or the source materials, from which it is derived, have been tested and found negative for HBsAg, anti-HIV and HCV RNA. As with all materials of biological origin, this preparation should be regarded as potentially hazardous to health. It should be used and discarded according to your own laboratorys safety procedures. Such safety procedures should include the wearing of protective gloves and avoiding the generation of aerosols. Care should be exercised in opening ampoules or vials, to avoid cuts.
Stability	Reference materials are held at Creative Biomart within assured, temperature-controlled storage facilities. Reference Materials should be stored on receipt as indicated on the label.
Storage	Unopened ampoules should be stored in the dark at or below -20°C. Please note: because of the inherent stability of lyophilized material, Creative Biomart may ship these materials at ambient temperature.

GENE INFORMATION

Gene Name	SERPINA1 serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1 [Homo sapiens];
Official Symbol	SERPINA1
Synonyms	SERPINA1; serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1; PI, serine (or cysteine) proteinase inhibitor, clade A (alpha 1 antiproteinase, antitrypsin), member 1; alpha-1-antitrypsin; A1A; A1AT; AAT; alpha 1 antitrypsin; alpha1AT; PI1; protease inhibitor 1 (anti elastase); serpin A1; alpha-1-antiproteinase; alpha-1-antitrypsin null; alpha-1 protease inhibitor; protease inhibitor 1 (anti-elastase), alpha-1-antitrypsin; serine (or cysteine) proteinase inhibitor, clade A,

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	member 1; PI; PRO2275; MGC9222; MGC23330;
Gene ID	5265
mRNA Refseq	NM_000295
Protein Refseq	NP_000286
MIM	107400
UniProt ID	P01009
Chromosome Location	14q32.1
Pathway	Complement and Coagulation Cascades, organism-specific biosystem; Complement and coagulation cascades, organism-specific biosystem; Complement and coagulation cascades, conserved biosystem; FOXA1 transcription factor network, organism-specific biosystem; Hemostasis, organism-specific biosystem; Platelet activation, signaling and aggregation, organism-specific biosystem; Platelet degranulation, organism-specific biosystem;
Function	protease binding; protein binding; serine-type endopeptidase inhibitor activity; serine-type endopeptidase inhibitor activity;