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Recombinant alpha 1-antitrypsin

Targets (1)

IDENTIFICATION

Name

Recombinant alpha 1-antitrypsin

Accession Number

DB05481

Туре

Small Molecule

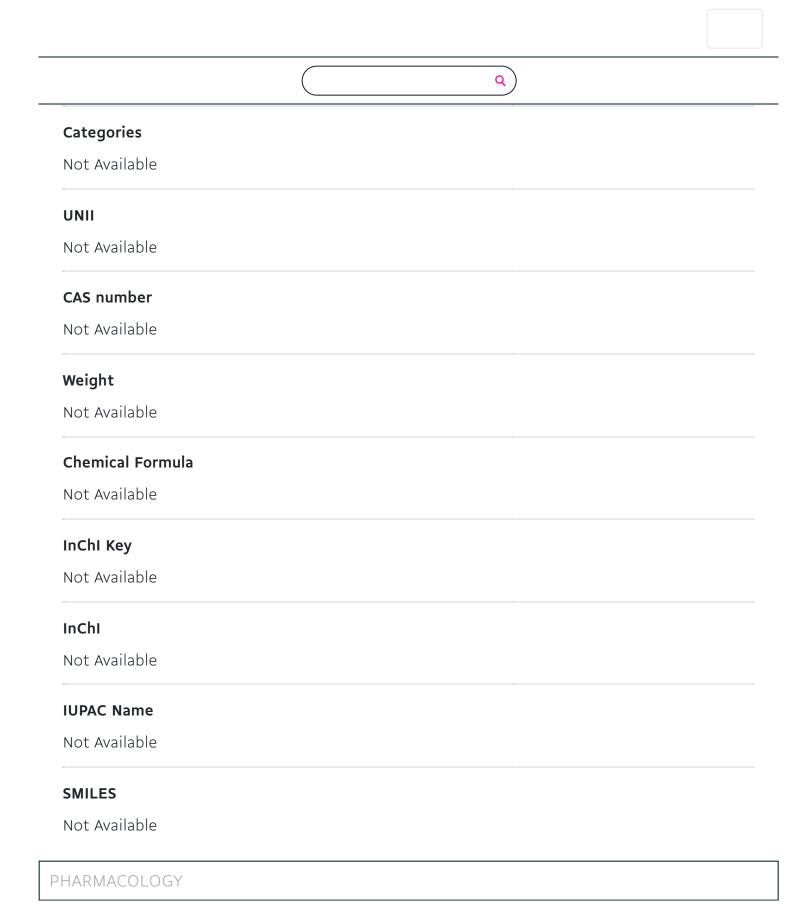
Groups

Investigational

Description

Alpha 1-antitrypsin is a glycoprotein primarily produced by hepatocytes, and to a lesser extent, immune system cells. Recombinant alpha 1-antitrypsin (rAAT) is produced from yeast, which unlike commercially available forms of plasma-derived AAT, eliminates the risk associated with blood-borne infectious agents and allows for a increased manufacturing. rAAT belongs to a family of structurally-related proteins classified as serine protease inhibitors or SERPINS, which are known to inhibit several proteases including trypsin, cathepsin G, thrombin, tissue kallikrein, as well as neutrophil elastase. The proteinase/antiproteinase balance is believed to be important for maintaining healthy skin. The rAAT topical gel (Dermolastin™) is indicated for patients with atopic dermatitis and psoriasis. The company has indicated that other formulations for gastroenterological and urological indications will also be developed.

Synonyms



Indication

Investigated for use/treatment in alpha 1 antitrypsin deficiency, atopic dermatitis, and chronic https://www.drugbank.ca/drugs/DB05481



immune system cells. Recombinant alpha 1-antitrypsin (rAAT) is produced from yeast, which unlike commercially available forms of plasma-derived AAT, eliminates the risk associated with blood-borne infectious agents and allows for a increased manufacturing. rAAT belongs to a family of structurally-related proteins classified as serine protease inhibitors or SERPINS, which are known to inhibit several proteases including trypsin, cathepsin G, thrombin, tissue kallikrein, as well as neutrophil elastase. The proteinase/antiproteinase balance is believed to be important for maintaining healthy skin.

Mechanism of action

rAAT belongs to a family of structurally-related proteins classified as serine protease inhibitors or SERPINS, which are known to inhibit several proteases including trypsin, cathepsin G, thrombin, tissue kallikrein, as well as neutrophil elastase.

U Alpha-1-antitrypsin

Not Available

Human

Absorption

Not Available

Volume of distribution

Not Available

Protein binding

Not Available

Metabolism

Not Available

Route of elimination

Not Available

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Not Available

Toxicity

Well tolerated in clinical trials.

Affected organisms

Not Available

Pathways

Not Available

Pharmacogenomic Effects/ADRs ()

Not Available

INTERACTIONS

Drug Interactions ()

Not Available

Food Interactions

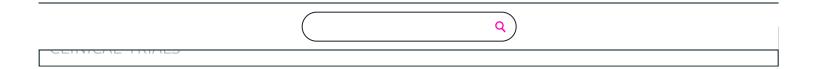
Not Available

REFERENCES

General References

- 1. Brown WM: rAAt (dermatological) Arriva/ProMetic. Curr Opin Mol Ther. 2006 Feb;8(1):69-75. [PubMed:16506528]
- 2. Brown WM: rAAt (inhaled) Arriva/Hyland Immuno. Curr Opin Mol Ther. 2006 Feb;8(1):76-82. [PubMed:16506529]

External Links



Clinical Trials ()

Not Available

PHARMACOECONOMICS

Manufacturers Not Available Packagers Not Available Dosage forms Not Available Prices Not Available Patents

Not Available

PROPERTIES

State

Solid

Experimental Properties

Not Available

Predicted Properties



SPECTRA

Mass Spec (NIST)

Not Available

Spectra

Not Available

TAXONOMY

Classification

Not classified

TARGETS

1. Alpha-1-antitrypsin
Kind
Protein
Organism
Human
Pharmacological action
Unknown General Function
Serine-type endopeptidase inhibitor activity
Specific Function
Inhibitor of serine proteases. Its primary target is elastase, but it also has a moderate

SERPINAL	 	
Uniprot ID		
P01009		
Uniprot Name		
Alpha-1-antitrypsin		
Molecular Weight		
46736.195 Da		

Drug created on November 18, 2007 11:25 / Updated on October 01, 2018 14:01

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