Human AMY2A / Alpha-amylase Protein(His Tag)

Catalog Number: **13277-H08H**

General Information

Gene Name Synonym:

AMY2; AMY2A; PA

Protein Construction:

A DNA sequence encoding the human AMY2A (P04746) (Met1-Leu511) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gln 16

Molecular Mass:

The recombinant human AMY2A consists of 507 amino acids and predicts a molecular mass of 57.3 KDa. It migrates as an approximately 53-58 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

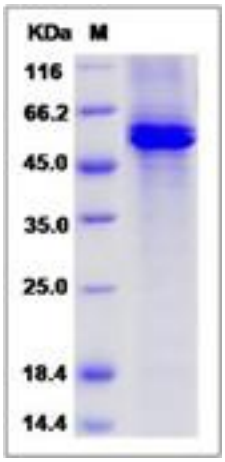
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Alpha-amylase is the major form of amylase found in humans and other mammals. Amylases are secreted proteins that hydrolyze 1,4-alpha-glucoside bonds in oligosaccharides and polysaccharides, and thus catalyze the first step in digestion of dietary starch and glycogen. Alpha-amylase hydrolyses alpha bonds of large, alpha-linked polysaccharides, such as starch and glycogen, yielding glucose and maltose. Amylases is widely expressed and is most prominent in pancreatic juice and saliva, each of which has its own isoform of human α-amylase. They behave differently on isoelectric focusing, and can also be separated in testing by using specific monoclonal antibodies.

References

1.Abe A, *et al.* (2005) Complexes of Thermoactinomyces vulgaris R-47 Alpha-amylase / AMY2A 1 and pullulan model oligossacharides provide new insight into the mechanism for recognizing substrates with alpha-(1,6) glycosidic linkages. FEBS J. 272(23):6145-53. 2.Aghajari, N, *et al.* (1998) Crystal structures of the psychrophilic Alpha-amylase / AMY2A from Alteromonas haloplanctis in its native form and complexed with an inhibitor. Protein Sci. 7(3): 564-72. 3.Ramasubbu, N, *et al.* (1996) Structure of Human Salivary -Amylase at 1.6 Resolution: Implications for its Role in the Oral Cavity. Acta Crystallographica Section D Biological Crystallography. 52(3):435-46.