

## Beta Amylase/AMY2B Protein, Human, Recombinant (His)

### General Information

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|-----------------------|--|
| Synonyms:             | AMY2;amylase, alpha 2B (pancreatic);β Amylase/AMY2B;HXA;amylase, α 2B (pancreatic); AMY3 |
| Protein Construction: | Gln16-Leu511   |
| Species:              | Human  |
| Expression Host:      | HEK293 Cells   |
| Accession:            | P19961   |
| Molecular Weight:     | 56.9 kDa (predicted); 50-60 kDa (reducing conditions)                                    |

### QC Testing

|                      |  |
|----------------------|--|
| Biological Activity: | Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first. |
| Purity:              | > 95% as determined by SDS-PAGE.   |
| Endotoxin:           | < 1.0 EU/μg of the protein as determined by the LAL method.  |
| Formulation:         | Supplied as a 0.2 μm filtered solution of 20mM Tris-HCl, pH 8.0.   |

### Preparation and Storage

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

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 is the major form of amylase found in humans and other mammals. 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.

### Reference

Abe A, et al. (2005) Complexes of *Thermoactinomyces vulgaris* R-47 Alpha-amylase / AMY2A 1 and pullulan model oligosaccharides provide new insight into the mechanism for recognizing substrates with alpha-(1,6) glycosidic linkages. *FEBS J.* 272(23):6145-53.

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.

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.

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