Creative Enzymes®

Native Almond α (1-3,4) Fucosidase

Cat. No. NATE-0260

Lot. No. (See product label)

Introduction

Description Tissue alpha-L-fucosidase is an enzyme that in humans is encoded by the FUCA1 gene. Alpha-Fucosidase is an enzyme that breaks down fucose. Fucosidosis is an autosomal recessive lysosomal storage disease caused by defective alpha-L-fucosidase with accumulation of fucose in the tissues. Different phenotypes include clinical features such as neurologic deterioration, growth retardation, visceromegaly, and seizures in a severe early form; coarse facial features, angiokeratoma corporis diffusum, spasticity and delayed psychomotor development in a longer surviving form; and an unusual spondylometaphyseoepiphyseal dysplasia in yet another form.

Synonyms α (1-3,4) Fucosidase; alpha-L-fucosidase; Alpha-Fucosidase; FUCA1; FUCA

Product Information

Species Almond

Source Almond meal

Form Lyophilized from 50 mM sodium acetate, 3 mg/ml bovine serum albumin (pH 5.0).

Molecular Weight 111.5 kD

Purity No protease activity was detectable after incubation of the enzyme with 0.4% Resorufin-labeled Casein for 18-24 hours at 37°C. Assays for exoglycosidase contaminants consist of extended incubations with the appropriate substrates. Lot-specific results are reported on the Certificate of Analysis.

Activity >1.5 U/mg

Optimum pH pH 5.0

Specificity The enzyme cleaves non-reducing α (1-3 or 1-4)-linked terminal fucose residues.

Buffer WS0062 5x Reaction Buffer (250 mM sodium acetate, pH 5.0)

Storage and Shipping Information

Storage Shipped on ice pack for next day delivery. Store at -20°C. Store lyophilized enzyme at-20°C. Enzyme reconstituted with the provided reaction buffer is stable at 2-8°C for at least two months and may be stored at-20°C for at least six months. Avoid repeated freeze/thaw cycles.

Stability After reconstitution with the incubation buffer supplied with the enzyme, >85% of the original activity is observed after two months at 2–8°C. In the buffer solution at 37°C, the half-life is approximately 80 hours.