

## Native Almond $\alpha$ (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 spondylometaphyseal dysplasia in yet another form.

**Synonyms**  $\alpha$  (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  $\alpha$  (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.