



# CERTIFICATE OF ANALYSIS

Version 3.7

revised on February 2, 2020

## Alpha-(1-3,4) Fucosidase

PRODUCT NAME: Alpha-(1-3,4) Fucosidase  
PRODUCT NUMBERS: E-F134, E-F134-200, E-F134-20

LOT NUMBER: 706.1A  
EXPIRATION DATE: December 03, 2021  
ASSAY DATE: January 28, 2020

SOURCE: *Xanthamonas manihotis*  
FORMULATION: 20 mM Tris-HCl, 25 mM NaCl pH 7.5, filter sterilized  
STORAGE: 4°C (Do not freeze)

ACTIVITY: Activity<sup>1</sup> 0.5 U/ml (Specification: ≥ 0.5 U/ml)  
Specific Activity<sup>2</sup> 2.1 U/mg (Specification: ≥ 2 U/mg)

### CONTAMINATING ACTIVITY ASSAYS:

Protease Assay <sup>3</sup>	Passed	(Specification "Passed")
Glycosidase activity <sup>4</sup>		
Beta-Galactosidase	Passed	(Specification "Passed")
N-acetylglucosaminidase	Passed	(Specification "Passed")
Alpha-Galactosidase	Passed	(Specification "Passed")

Contaminant tested for:  
Protease  
Beta-Galactosidase  
N-acetylglucosaminidase  
Alpha-Galactosidase

Substrate:  
Denatured BSA  
p-nitrophenyl-beta-D-galactopyranoside  
p-nitrophenyl-beta-D-N-acetylglucosaminide  
p-nitrophenyl-alpha-D-galactopyranoside

1. Defined as the amount of enzyme required to cleave 1  $\mu$ mole of fucose from Lewis X trisaccharide, 4-methylumbelliferyl glycoside in 1 minute at 37°C and pH 5.0. Lewis X trisaccharide is Gal Beta-(1-4)[Fuc alpha-(1-3)]GlcNAc.
2. Protein concentration determined by Bradford method, using BSA as a standard.
3. For the protease assay, 10  $\mu$ g of denatured BSA is incubated at 37°C for 24 hr with 2  $\mu$ l of enzyme. SDS-PAGE analysis of the treated BSA shows no evidence of degradation.
4. Unexpected glycosidic activity is tested by incubating the enzyme for 24 hours at 37°C with the appropriate substrates; the detection limit of this assay is 5  $\mu$ U/ml (IUB). A passing lot will have no detectable activity.

President - QA-Bio Inc  
Authorized by Mike Gibson  
February 2, 2020