



α -FUCOSIDASE from *T. maritima* (Lot 70501e)

Recombinant - Thermostable

E-FUCTM

(EC 3.2.1.51)

CAZy: GH Family 29

04/19

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 54,351)
- Single major band on isoelectric focusing (pI ~ 6.1)

2. SPECIFIC ACTIVITY:

2.6 U/mg protein at pH 5.0 and 25°C

~4.2 U/mg protein (37°C); ~15.0 U/mg protein (60°C); ~195 U/mg protein (95°C)

One Unit of α -fucosidase activity is defined as the amount of enzyme required to release one μ mole of *p*-nitrophenol (*p*-NP) per minute from *p*-nitrophenyl- α -L-fucopyranoside (0.476 mM) in citrate (50 mM)/phosphate (100 mM) buffer, pH 5.0 at the temperatures indicated.

3. OTHER ACTIVITIES (as a percentage of α -fucosidase activity):

Enzyme Measured	Substrate	Activity, %
α -Fucosidase	<i>p</i> -NP- α -L-fucopyranoside	100
β -N-Acetylglucosaminidase	<i>p</i> -NP-N-acetyl- β -D-glucosaminide	< 0.0004
α -D-Galactosidase	<i>p</i> -NP- α -D-galactoside	< 0.0001
β -D-Galactosidase	<i>p</i> -NP- β -D-galactoside	< 0.0002
β -D-Glucosidase	<i>p</i> -NP- β -D-glucoside	< 0.0001
α -D-Mannosidase	<i>p</i> -NP- α -D-mannoside	< 0.0001
β -D-Mannosidase	<i>p</i> -NP- β -D-mannoside	< 0.0001
β -D-Xylosidase	<i>p</i> -NP- β -D-xyloside	~ 0.0007
Protease	Protazyme	u.d.*

Action on *p*-NP-substrates was determined at a final substrate concentration of 4 mM in citrate (50 mM)/phosphate (100 mM) buffer, pH 5.0 at 37°C.

* undetectable.

4. PHYSICOCHEMICAL PROPERTIES:

pH Optima: 5.0 (at 60°C)

Temperature Optima: 95°C

pH Stability: 4.0-6.0 (20 hr at 4°C)

Temperature Stability: stable up to 100°C
(15 min at pH 5.0)

5. STORAGE CONDITIONS:

The enzyme is supplied as an ammonium sulphate suspension in 0.02% (w/v) sodium azide and should be stored at 4°C. **Swirl to mix the enzyme immediately prior to use.**