α-(1-2,3,4,6)-L-FUCOSIDASE from *Homo sapiens* (Lot 141001a)

Recombinant

E-FUCHS **03/15**

(EC 3.2.1.51) alpha-L-fucosidase; alpha-L-fucoside fucohydrolase
CAZy: GH Family 29
CAS: 9037-65-4

PROPERTIES

1. ELECTROPHORETIC PURITY:

- Single band on SDS-gel electrophoresis (MW ~ 52,000)
- One major band on isoelectric focusing (pI ~ 6.3)

2. SPECIFIC ACTIVITY:

7 U/mg protein (on *p*NP-α-L-fucopyranoside) at pH 4.0 and 25°C; ~ 23 U/mg protein (on *p*NP-α-L-fucopyranoside) at pH 4.0 and 37°C; ~ 68 U/mg protein (on *p*NP-α-L-fucopyranoside) at pH 4.0 and 50°C.

One Unit of α-L-fucosidase activity is defined as the amount of enzyme required to release one µmole of *p*-nitrophenol (*p*NP) per minute from *p*-nitrophenyl-α-L-fucopyranoside (1 mM) in sodium acetate buffer (100 mM) at pH 4.0 at the temperatures indicated.

3. SPECIFICITY:

Broad specificity; hydrolysis of terminal non-reducing α-(1-2,3,4,6)-linked L-fucose residues from glycoproteins and oligosaccharides.

4. SUBSTRATES:

Substrate	Linkage
2-Fucosyllactose	α-1,2
3-Fucosyllactose	α-1,3
2-Acetamido-2-deoxy-4-*O*-(α-L-fucopyranosyl)-D-glucopyranose	α-1,4
2-Acetamido-2-deoxy-6-*O*-(α-L-fucopyranosyl)-D-glucopyranose	α-1,6

Action on di- and trisaccharides was determined at a final substrate concentration of 10 mg/mL in sodium acetate buffer (100 mM), pH 4.0 at 40°C. Hydrolysis of the substrates was detected by measuring α-L-fucose released using the Fucose Assay Kit (**K-FUCOSE**).

5. PHYSICOCHEMICAL PROPERTIES:

Recommended conditions of use are at pH 3.0-4.0 and up to 60°C

pH Optima:	3.0-4.0
pH Stability:	4.0-9.0 (> 75% control activity after 24 hours at 4°C)
Temperature Optima:	50°C (10 min reaction)
Temperature Stability:	up to 60°C

6. 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. For assay, this enzyme should be diluted in sodium acetate buffer (100 mM), pH 4.0 containing 1 mg/mL BSA. **Swirl to mix the enzyme immediately prior to use.**

7. EXPERIMENTAL DATA: