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Product Information

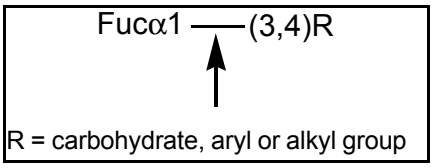
α-1→(3,4)-Fucosidase solution
from *Xanthomonas* specie
buffered aqueous solution

Catalog Number **F3023**
Storage Temperature 2–8 °C

CAS RN 9037-65-4
EC 3.2.1.51
Synonym: α-L-Fucoside fucohydrolase

Product Description
One of the distinguishing features of the proteome in eurkaryotic cells is that most proteins are subject to post-translational modification, of which glycosylation is the most common form. It is estimated that more than half of all proteins are glycoproteins. Two major classes of oligosaccharides (glycans) may be attached to proteins. N-linked glycans are attached to the amide side chain of Asn residues, which form part of the consensus sequence AsnXaaSer/Thr, while O-linked glycans may be added to the hydroxyl side chain of Ser or Thr residues.

α-1→(3,4)-Fucosidase is highly specific and cleaves non-reducing terminal fucose when linked α-1→3 or α-1→4 to complex carbohydrates. The enzyme is useful for the analysis of fucosylated N- and O-linked glycans using sequential digestion with exoglycosidases.[1-3] It has also been used in the analysis and modification of glycoconjugates including blood group oligosaccharides[4] and glycolipids.[5]



R = carbohydrate, aryl or alkyl group

Each vial contains 0.02 unit (≥0.5 unit/ml)

Unit Definition: One unit will release 1 μmole of fucose from Lewis X trisaccharide, 4-methylumbelliferyl glycoside per minute at pH 5.0 at 37 °C.

Each lot of enzyme is tested and confirmed negative for the following contaminating activities: neuraminidase, α/β-galactosidase, α/β-mannosidase, β-xylosidase, N-acetylglucosaminidase, and α–1→2-fucosidase. Protease activity was also not detected.

Components
α-1→(3,4)-Fucosidase (Catalog Number F3023) – The enzyme is supplied in 20 mM Tris-HCl, pH 7.5, containing 25 mM NaCl.

5x Reaction Buffer (Catalog Number E5879) – 250 mM sodium phosphate, pH 5.0

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
It is recommended to store the product at 2–8 °C.
Do Not Freeze.

Procedure
1. Add up to 1 nmole of oligosaccharide to a microcentrifuge tube.
2. Add deionized water to bring the total volume to 15 μl.
3. Add 4 μl of 5x Reaction Buffer (Catalog Number E5879).
4. Add 1 μl of α-1→(3,4)-Fucosidase (Catalog Number F3023).
5. Incubate for 1 hour at 37 °C.

References
1. Parekh, R.B. *et al.*, EMBO J., **6**, 1233 (1987).
2. Edge, C.J. *et al.*, Proc. Nat. Acad. Sci. (USA), **89**, 6638 (1992).
3. Prime, S. *et al.*, J. Chromatog., **720**, 263 (1996).
4. Clausen, H. *et al.*, Biochem., **25**, 7075 (1986).
5. Abe, K. *et al.*, J. Biol. Chem., **258**, 11793 (1983).

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