3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

# ProductInformation

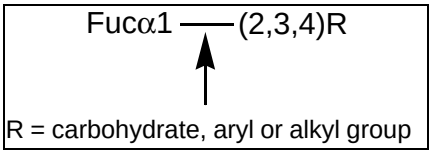
**α-1→(2,3,4)-Fucosidase**
**from *Xanthomonas sp.***

Product Number **F 1924**
Storage Temperature 2–8 °C

CAS# 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→(2,3,4)-Fucosidase cleaves non-reducing terminal fucose when linked α-1→2, 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.[1,2,3] It has also been used in the analysis and modification of glycoconjugates including blood group oligosaccharides[4] and glycolipids.[5]




Each vial contains 0.004 unit.

Unit Definition: One unit will release 1 µmole of fucose from 3-fucosyllactose per minute at pH 5.0 at 37 °C.

Each lot of enzyme is tested and confirmed negative for the following contaminating activities: α-galactosidase, β-galactosidase, N-acetylglucosaminidase, and β-xylosidase. Protease activity was also not detected.

**Components**
α-1→(2,3,4)-Fucosidase (Product No. F 1924) – The enzyme is supplied in 20 mM Tris-HCl, pH 7.5, containing 25 mM NaCl.

5X Reaction Buffer (Product No. E 5879) – 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 Material 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 (Product No. E 5879).
4. Add 1 µl of α-1→(2,3,4)-Fucosidase (Product No. F 1924).
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).

AE,MAM 01/05-1