



## Certificate of Analysis

### LudgerPure™ Glycan Library from Porcine Fibrinogen

Cat. #: CLIB-PFibrinogen-01

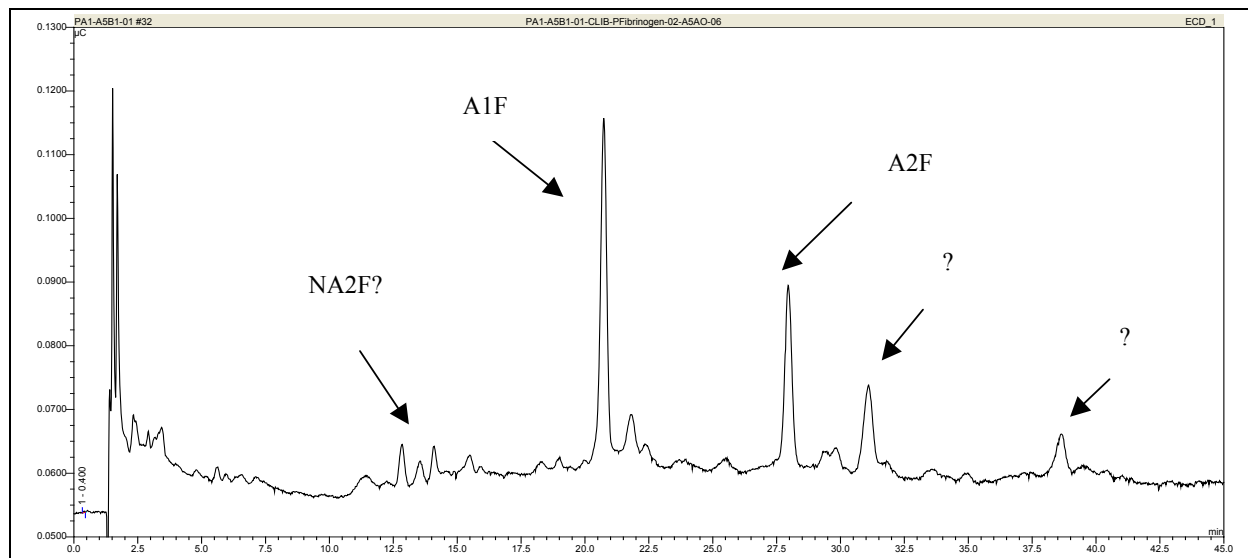
Lot #: A5AO-06

Size: 20 µg

**Description:** A2F family N-glycans released from porcine fibrinogen by hydrazinolysis. The two main glycan components are di-sialylated and mono-sialylated core-fucosylated, bi-antennary glycans A2F and A1F.

**Form:** Dry. Dried by centrifugal evaporation from an aqueous solution.

**Main Species:** A2F (mol. wt. 2370) and A1F (mol. wt. 2079).



**Figure 1: HPAE-PAD HPLC Profile of A2F Family Glycans from porcine fibrinogen (Cat. #: CLIB-PFibrinogen-01)**

#### HPLC Running Conditions

Column: Dionex PA1 carb

Flow: 1 ml/min

Temperature: 30 °C.

Solvent A: 100 mM sodium hydroxide

Solvent B: 1 M sodium acetate in 100 mM sodium hydroxide

Gradient: 0-3 min - 2 % B

3-45 min - 2-25 % B

Detector: ED40 electrochemical detector

## Glycan Information

A2F family biantennary glycans with core  $\alpha(1-6)$  fucosylation (A2F, A1F, NA2F, and NGA2F) are naturally found as N-linked oligosaccharides conjugated to a wide range of glycoproteins including IgG from several mammalian species [Hamako et al (1993)], porcine vitronectin [Yoneda et al (1993)], porcine thyroglobulin [Charlwood et al (1999)], seminal plasma spermadhesin [Nimtz et al (1999)], and recombinant glycoproteins expressed in mammalian cell lines [Sato et al (1999)]. The truncated core structure M3N2F is also found in glycoproteins of insects and recombinant mammalian glycoproteins expressed in insect cells [Voss et al (1993)]. The structures and possible roles of fucosylated glycans are reviewed by Staudacher et al (1999).

Core  $\alpha(1-6)$  fucosylation of glycoprotein glycans is an important process in a number of normal and aberrant biological processes including cell adhesion, neurogenesis, the development and cancers, the natural suppression of cancer metastases, and liver diseases.

### **Charlwood J, Birrell H, Organ A, Camilleri P (1999)**

A chromatographic and mass spectrometric strategy for the analysis of oligosaccharides: determination of the glycan structures in porcine thyroglobulin. *Rapid Commun Mass Spectrom* 13:716-23.

### **Hamako J, Matsui T, Ozeki Y, Mizuochi T, Titani (1993)**

Comparative studies of asparagine-linked sugar chains of immunoglobulin G from eleven mammalian species. *Comp Biochem Physiol [B]* 1993 Dec;106(4):949-54.

### **Nimtz M, Grabenhorst E, Conradt HS, Sanz L, Calvete JJ (1999)**

Structural characterization of the oligosaccharide chains of native and crystallized boar seminal plasma spermadhesin PSP-I and PSP-II glycoforms. *Eur J Biochem* 1999 Oct;265(2):703-18.

### **Sato Y, Liu C, Wojczyk BS, Kobata A, Spitalnik SL, Endo T (1999)**

'Study of the sugar chains of recombinant human amyloid precursor protein produced by Chinese hamster ovary cells'. *Biochim Biophys Acta* 1472:344-58.

### **Staudacher E, Altmann F, Wilson IB, Marz L (1999)**

Fucose in N-glycans: from plant to man. *Biochim Biophys Acta* 1999 Dec 6;1473(1):216-36.

### **Voss T, Ergulen E, Ahorn H, Kubelka V, Sugiyama K, Maurer-Fogy I, Glossl J (1993)**

Expression of human interferon omega 1 in Sf9 cells. No evidence for complex-type N-linked glycosylation or sialylation. *Eur J Biochem* 1993 Nov 1;217(3):913-9.

**Yoneda A, Ogawa H, Matsumoto I, Ishizuka I, Hase S, Seno N (1993)**

Structures of the N-linked oligosaccharides on porcine plasma vitronectin. *Eur J Biochem* 1993 Dec 15;218(3):797-806