

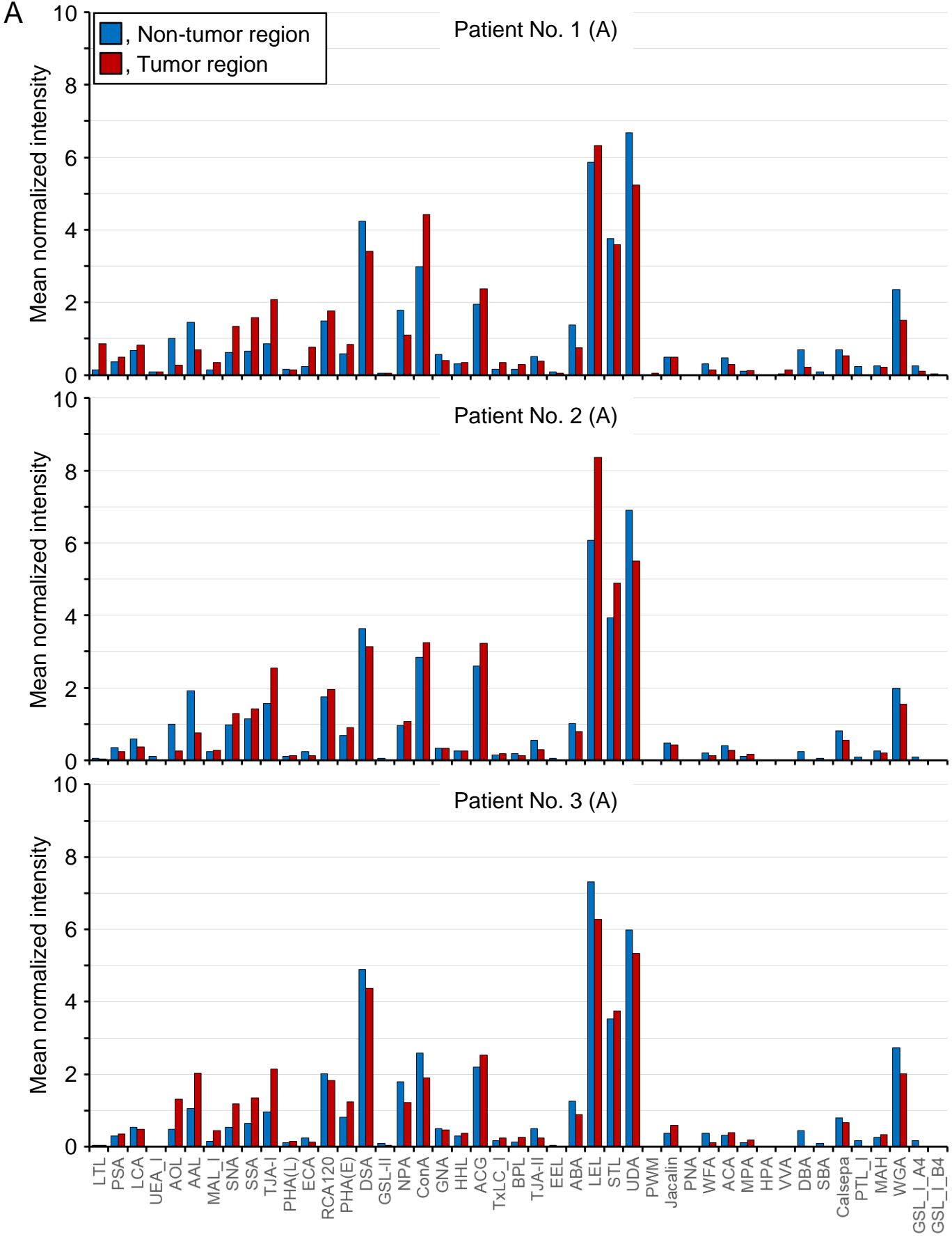
**Supplementary Table 1. Abbreviations and carbohydrate specificities of 45 lectins on the LecChip Ver.1.0**

Lectin	Origin	Reactivity <sup>a</sup>
LTL	<i>Lotus tetragonolobus</i>	Fuc $\alpha$ 1,3-GlcNAc; Sialyl Lewis x; Lewis x
PSA	<i>Pisum sativum</i>	Fuc $\alpha$ 1,6-GlcNAc; $\alpha$ -Man
LCA	<i>Lens culinaris</i>	Fuc $\alpha$ 1,6-GlcNAc; $\alpha$ -Man; $\alpha$ -Glc
UEA-I	<i>Ulex europaeus</i>	Fuc $\alpha$ 1,2-Gal $\beta$ 1,4-GlcNAc (Type II, H antigen)
AOL	<i>Aspergillus oryzae</i>	Terminal $\alpha$ -Fuc; Sialyl Lewis x; Lewis x
AAL	<i>Aleuria auranti</i>	Terminal $\alpha$ -Fuc; Sialyl Lewis x; Lewis x
MAL-I	<i>Maackia amurensis</i>	Sia $\alpha$ 2,3-Gal
SNA	<i>Sambucus nigra</i>	Sia $\alpha$ 2,6-Gal/GalNAc
SSA	<i>Sambucus sieboldiana</i>	Sia $\alpha$ 2,6-Gal/GalNAc
TJA-I	<i>Trichosanthes japonica</i>	Sia $\alpha$ 2,6-Gal $\beta$ 1,4-GlcNAc
PHA-L	<i>Phaseolus vulgaris</i>	Tri/tetra-antennary complex-type <i>N</i> -glycan
ECA	<i>Erythrina cristagalli</i>	Lac/LacNAc
RCA120	<i>Ricinus communis</i>	Lac/LacNAc
PHA-E	<i>Phaseolus vulgaris</i>	Bi-antennary complex-type <i>N</i> -glycan with outer Gal; Bisecting GlcNAc
DSA	<i>Datura stramonium</i>	Chitin; PolyLacNAc; LacNAc
GSL-II	<i>Griffonia simplicifolia</i>	Agalactosylated tri/tetra antennary <i>N</i> -glycan
NPA	<i>Narcissus pseudonarcissus</i>	High-Mannose including Man $\alpha$ 1,6-Man
ConA	<i>Canavalia ensiformis</i>	High-Mannose including Man $\alpha$ 1,6 (Man $\alpha$ 1,3)-Man
GNA	<i>Galanthus nivalis</i>	High-Mannose including Man $\alpha$ 1,3-Man
HHL	<i>Hippeastrum hybrid</i>	High-Mannose including Man $\alpha$ 1,3-Man or Man $\alpha$ 1,6-Man
ACG	<i>Agroclybe cylindracea</i>	Sia $\alpha$ 2,3-Gal $\beta$ 1,4-GlcNAc
TxLC-I	<i>Tulipa gesneriana</i>	Man $\alpha$ 1,3(Man $\alpha$ 1,6)-Man; Bi/tri-antennary complex-type <i>N</i> -glycan; GalNAc
BPL	<i>Bauhinia purpurea</i>	Gal $\beta$ 1,3-GalNAc; Tri/tetra-antennary complex-type <i>N</i> -glycan with outer Gal
TJA-II	<i>Trichosanthes japonica</i>	Fuc $\alpha$ 1,2-Gal $\beta$ 1/GalNAc $\beta$ 1; Tri/tetra-antennary complex-type <i>N</i> -glycan with outer Gal
EEL	<i>Euonymus europaeus</i>	Gal $\alpha$ 1,3[Fuc $\alpha$ 1,2-Gal] (B antigen); Gal $\alpha$ 1,3-Gal
ABA	<i>Agaricus bisporus</i>	Gal $\beta$ 1,3-GalNAc $\alpha$ -Thr/Ser (T antigen); Sialyl-T
LEL	<i>Lycopersicon esculentum</i>	Chitin; PolyLacNAc
STL	<i>Solanum tuberosum</i>	Chitin; PolyLacNAc
UDA	<i>Urtica dioica</i>	Chitin; PolyLacNAc
PWM	<i>Phytolacca Americana</i>	Chitin; PolyLacNAc
Jacalin	<i>Artocarpus integrifolia</i>	Gal $\beta$ 1,3-GalNAc $\alpha$ -Thr/Ser (T); GalNAc $\alpha$ -Thr/Ser (Tn antigen)
PNA	<i>Arachis hypogaea</i>	Gal $\beta$ 1,3-GalNAc $\alpha$ -Thr/Ser (T)
WFA	<i>Wisteria floribunda</i>	GalNAc $\beta$ 1,4-GlcNAc (LacdiNAc); Terminal GalNAc
ACA	<i>Amaranthus caudatus</i>	Gal $\beta$ 1,3-GalNAc $\alpha$ -Thr/Ser (T)
MPA	<i>Maclura pomifera</i>	Gal $\beta$ 1,3-GalNAc $\alpha$ -Thr/Ser (T); GalNAc $\alpha$ -Thr/Ser (Tn)
HPA	<i>Helix pomatia</i>	Terminal GalNAc
VVA	<i>Vicia villosa</i>	$\alpha$ -, $\beta$ -linked terminal GalNAc; GalNAc $\alpha$ -Thr/Ser (Tn)
DBA	<i>Dolichos biflorus</i>	GalNAc $\alpha$ -Thr/Ser (Tn); GalNAc $\alpha$ 1,3-GalNAc
SBA	<i>Glycine max</i>	Terminal GalNAc (especially GalNAc $\alpha$ 1,3-Gal)
Calsepa	<i>Calystegia sepium</i>	Man; Maltose
PTL-I	<i>Psophocarpus tetragonolobus</i>	$\alpha$ -GalNAc; Gal
MAH	<i>Maackia amurensis</i>	Sia $\alpha$ 2,3-Gal $\beta$ 1,3(Sia $\alpha$ 2,6)-GalNAc (disialyl-T)
WGA	<i>Triticum aestivum</i>	Chitin; Multivalent Sia
GSL-I-A4	<i>Griffonia simplicifolia</i>	$\alpha$ -GalNAc; GalNAc $\alpha$ -Thr/Ser (Tn)
GSL-I-B4	<i>Griffonia simplicifolia</i>	$\alpha$ -Gal

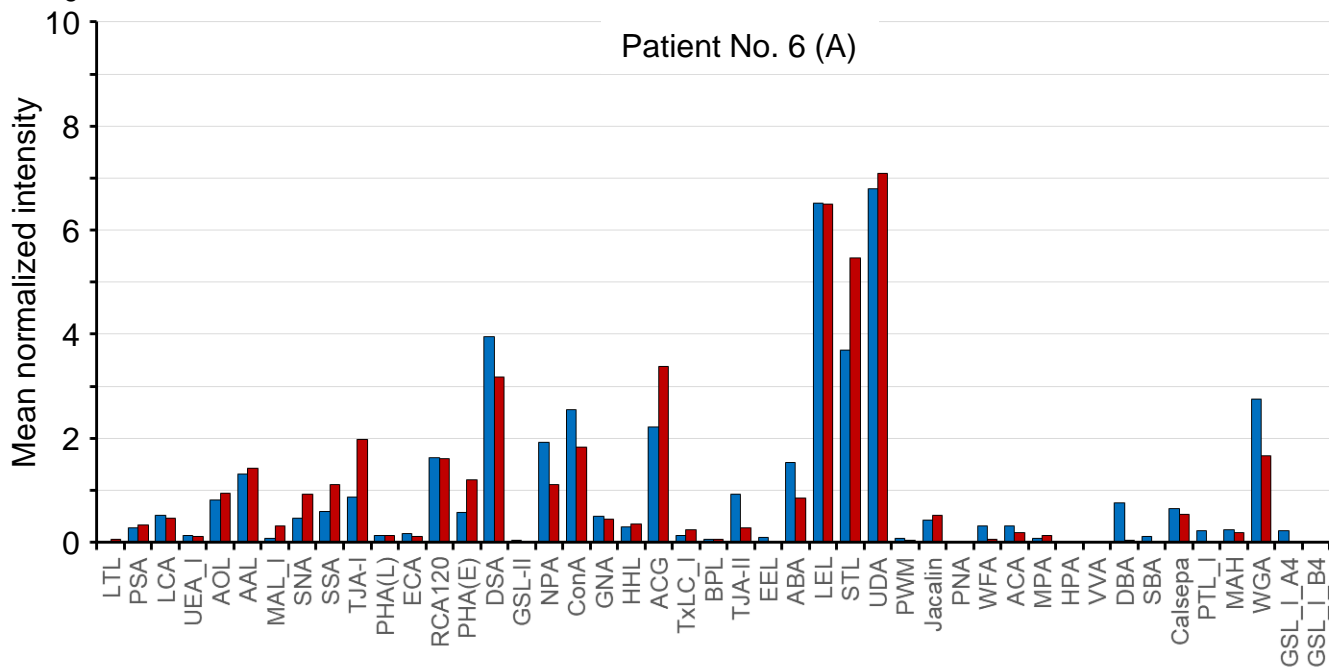
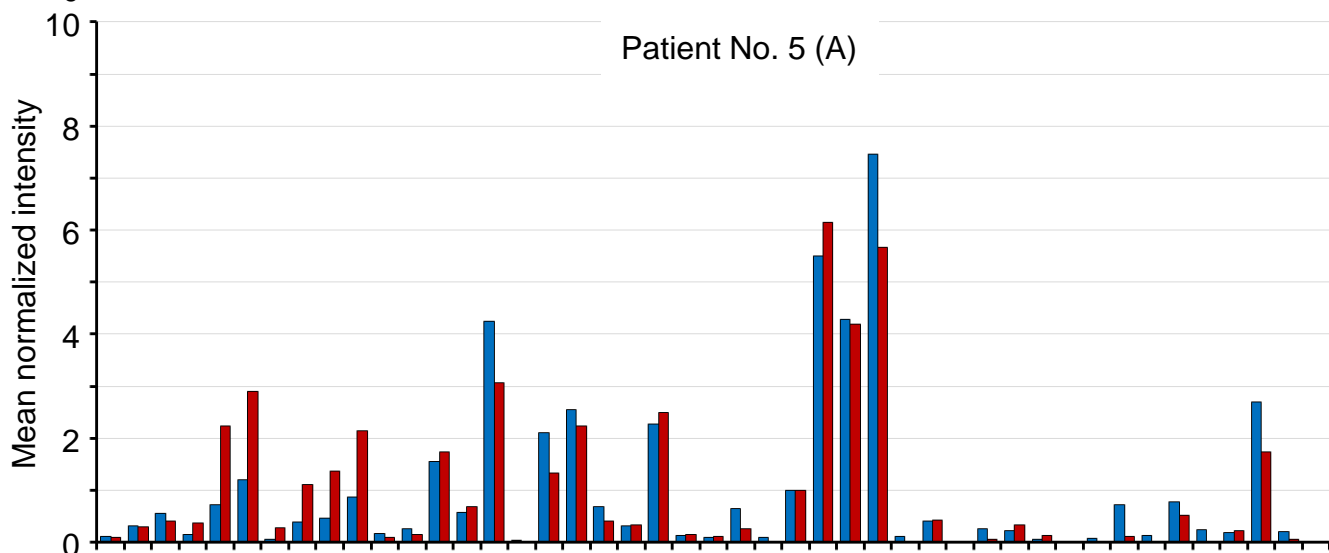
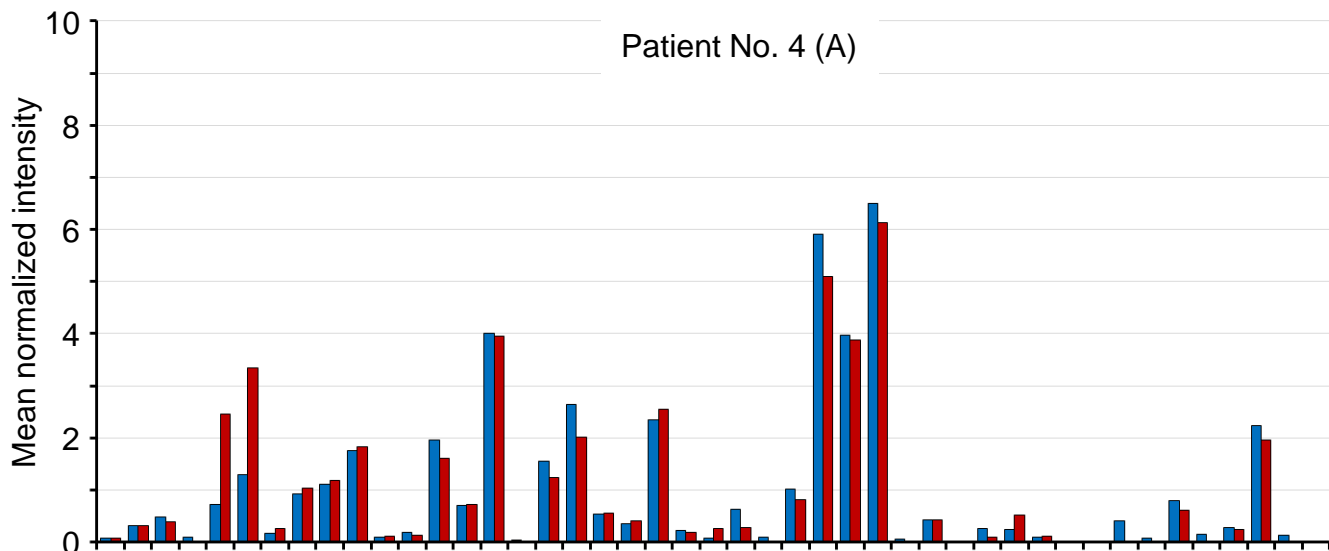
<sup>a</sup>These reactivity of lectins were based on Lectin Frontier Database (LfDB; <https://acgg.asia/lfdb2/>).

**Supplementary Table 2. Clinicopathologic features for 14 PDAC cases.**

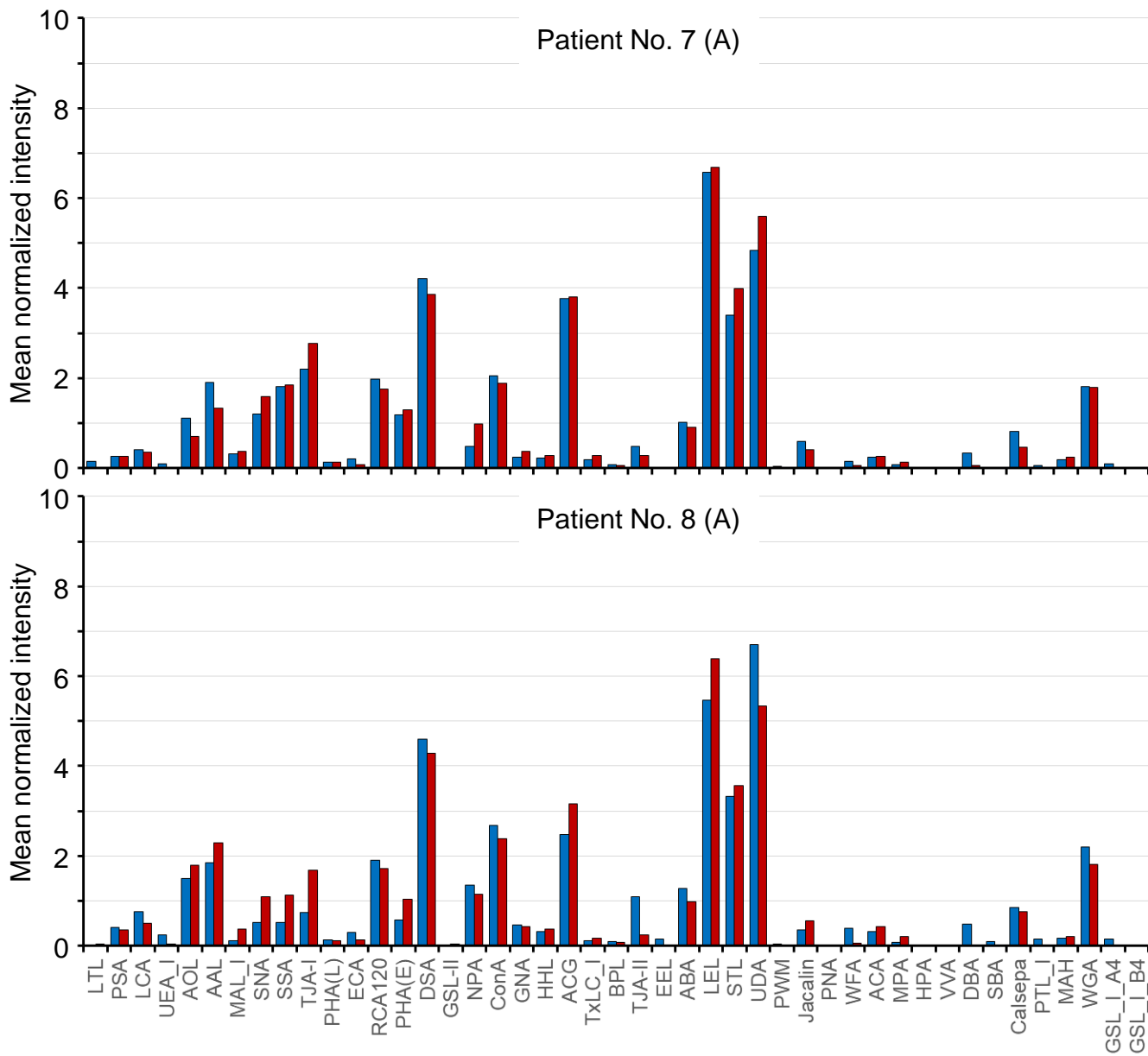
Age	[Range]
Mean, years	67.4 [55-84]
Gender	
Male	10
Female	4
Blood type	
O	3
A	8
B	2
AB	1
Tumor location	
Head	4
Body	4
Tail	6
Tumor size	
Mean, cm	3.0 [1.6-5.7]
Tumor grade	
G1	1
G2	10
G3	3
Stage (AJCC 8th edition)	
I	3
II	10
III	1



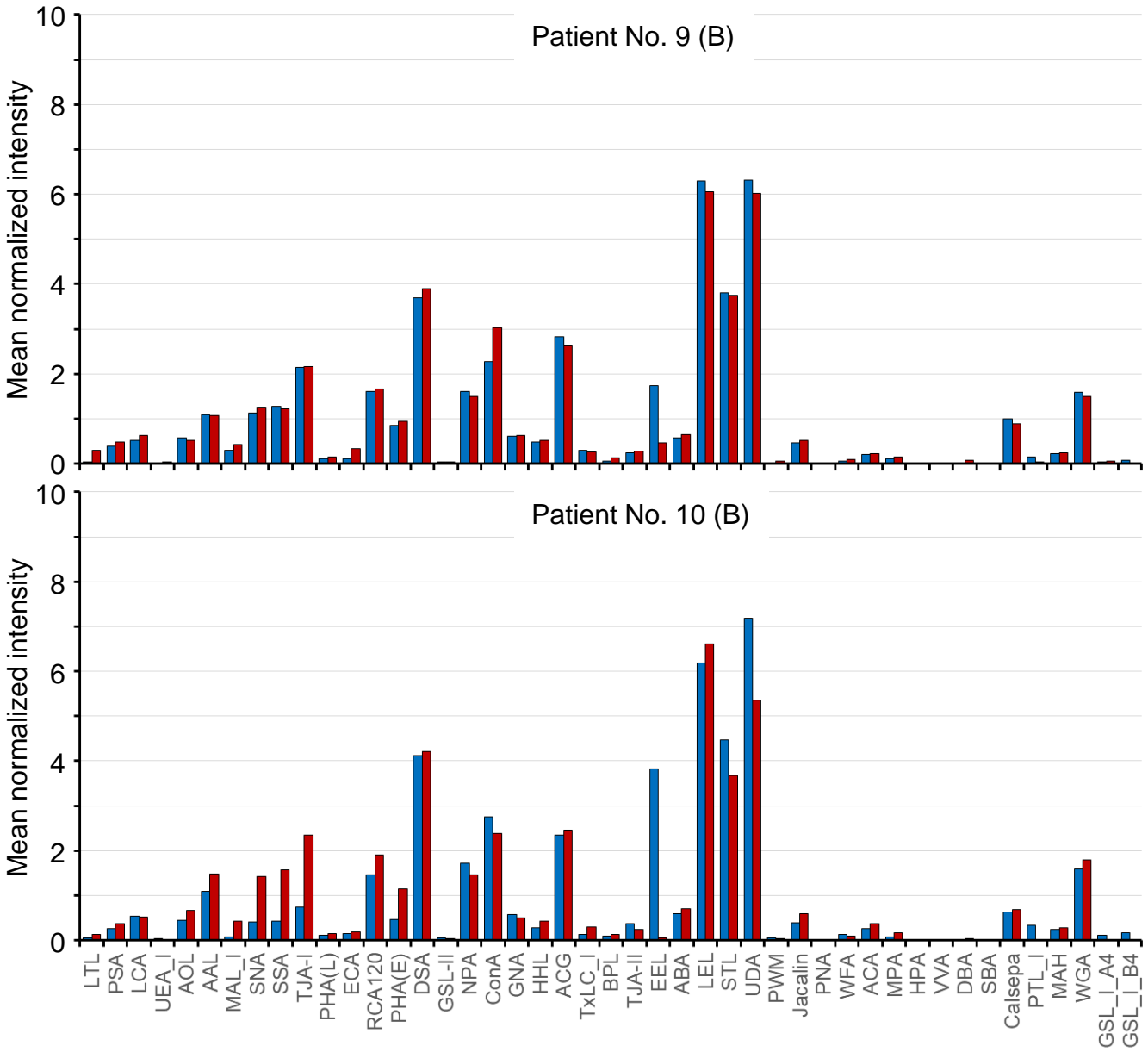
**Supplementary Figure 1. The tissue glycomic profiles of 14 PDAC cases.**  
 (A) Blood type A (Patient No. 1–8), (B) Blood type B (No. 9–10), (C) Blood type O (No. 11–13), and (D) Blood type AB (No.14). Blue, non-tumor regions; Red, tumor regions.

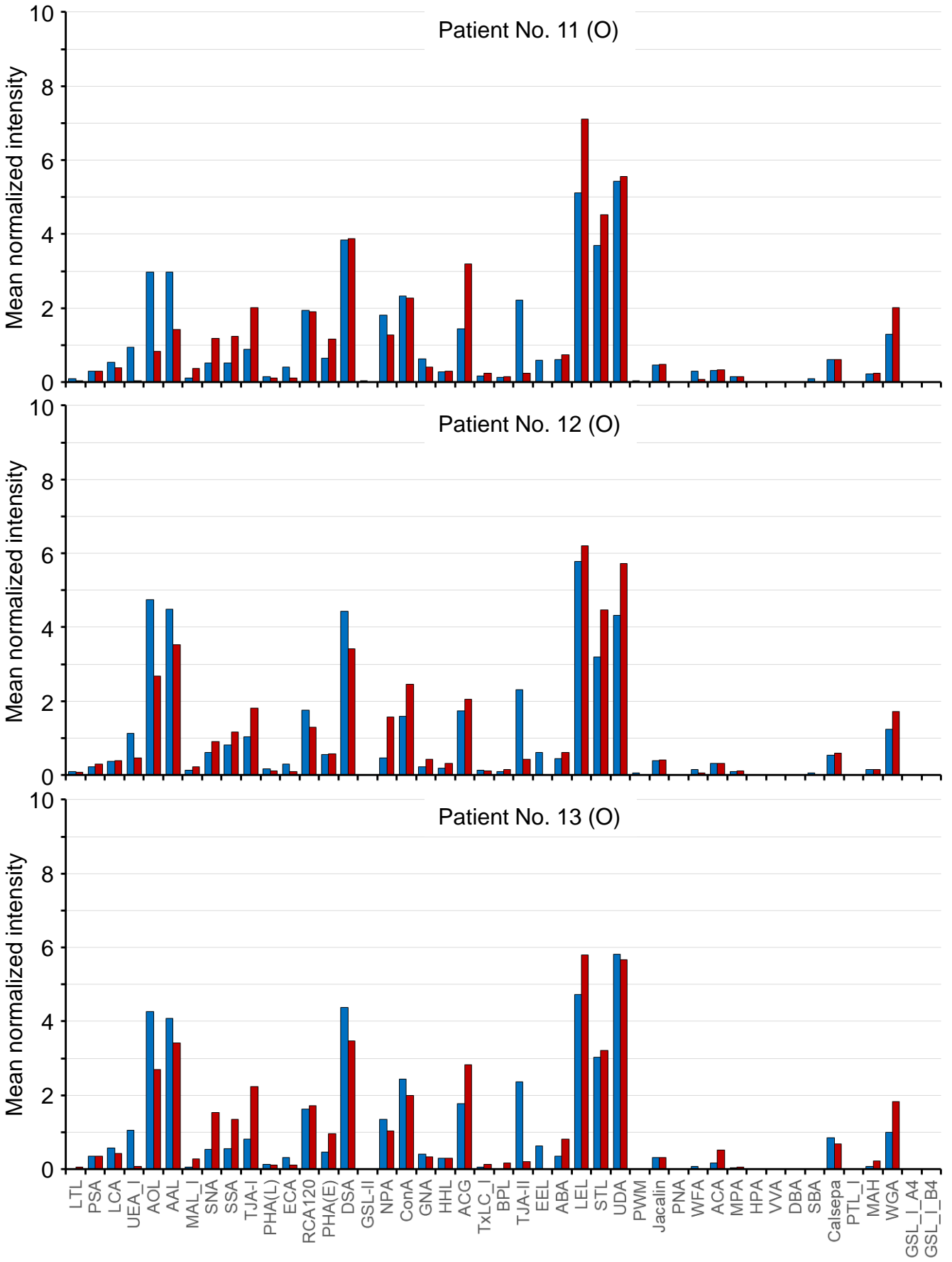


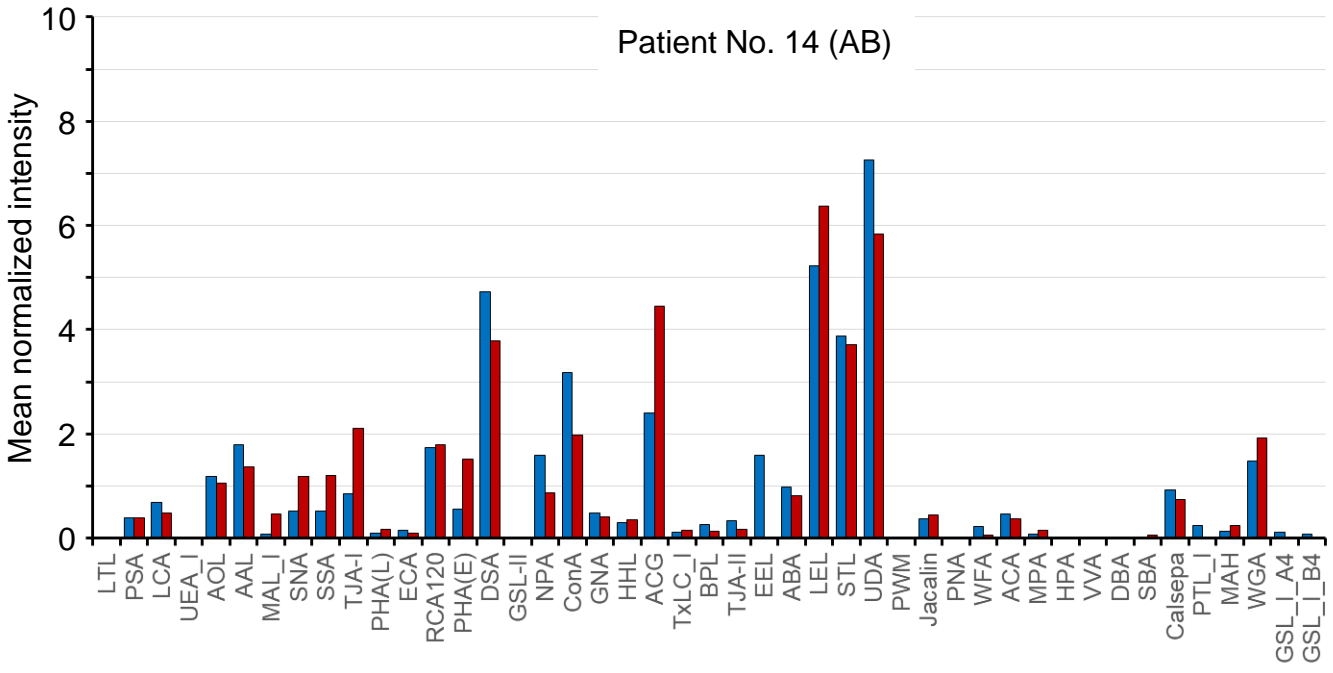
Supplementary Figure 1. Continued



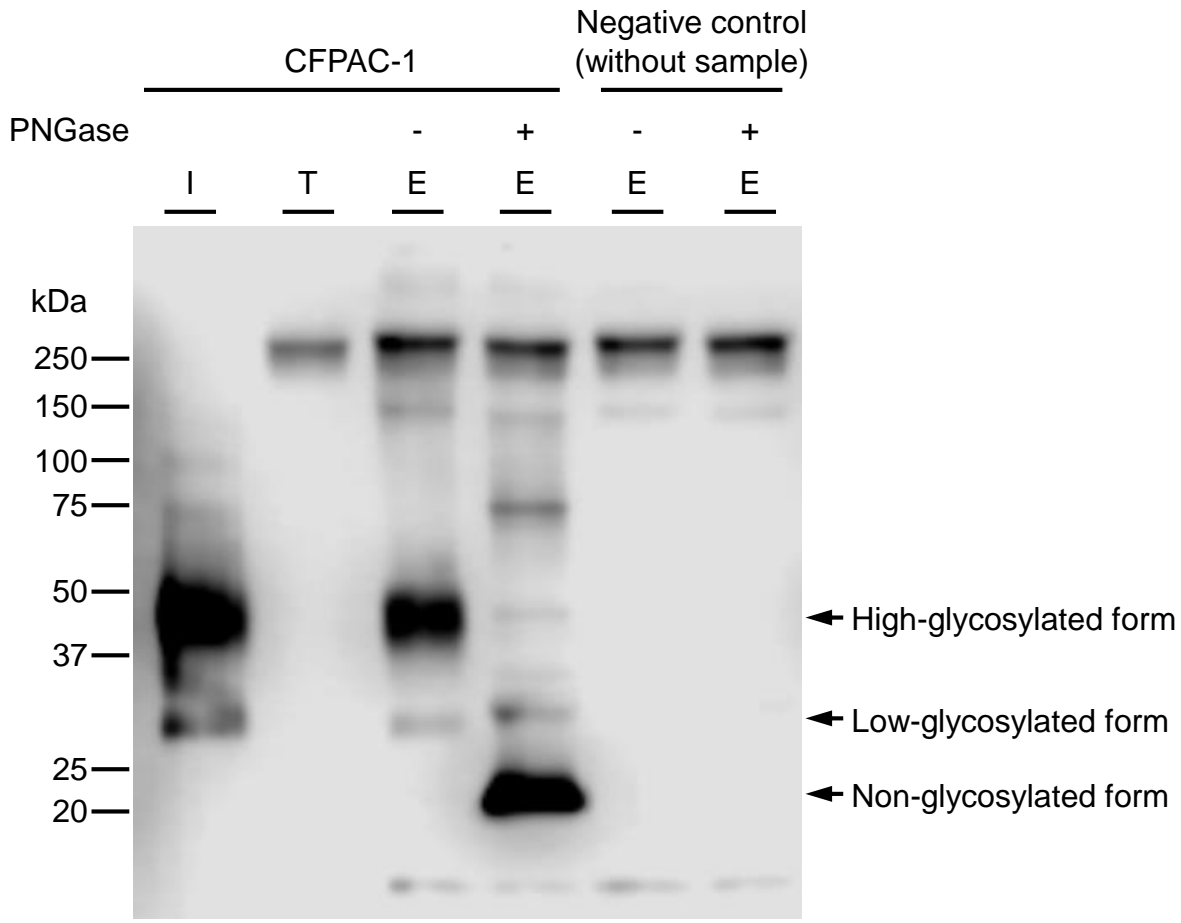
Supplementary Figure 1. Continued

**B****Supplementary Figure 1. Continued**

**C****Supplementary Figure 1. Continued**

**D****Supplementary Figure 1. Continued**



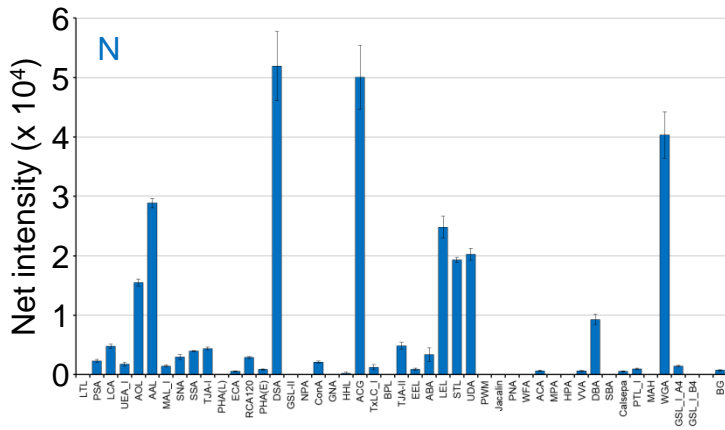


IP/IB,  $\alpha$ -Basigin mAb

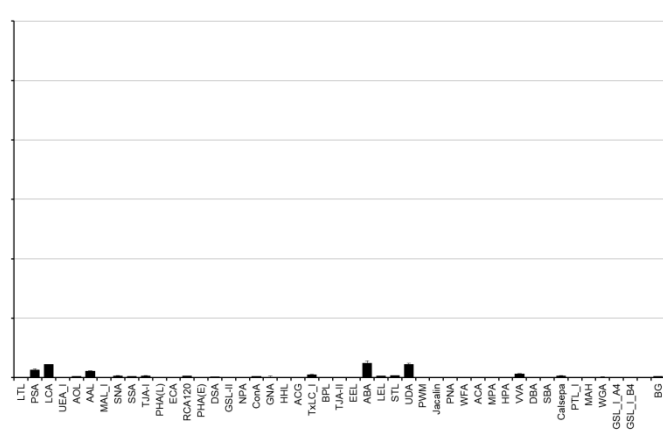
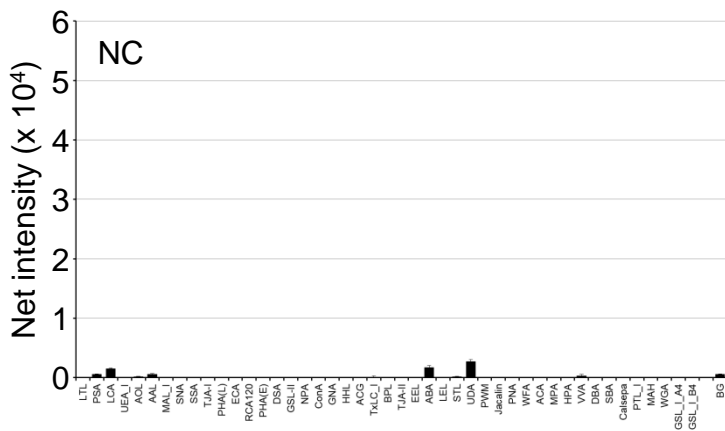
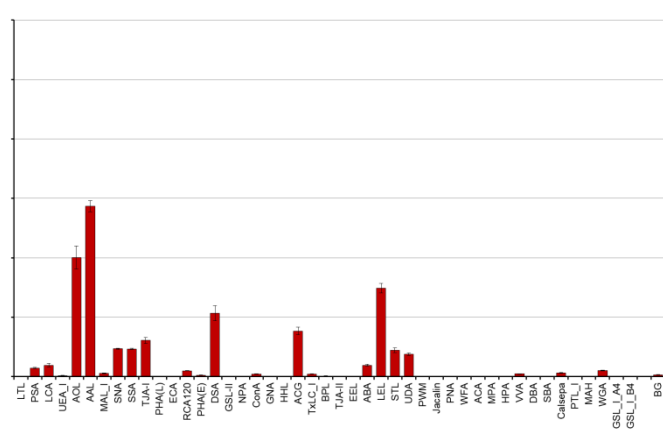
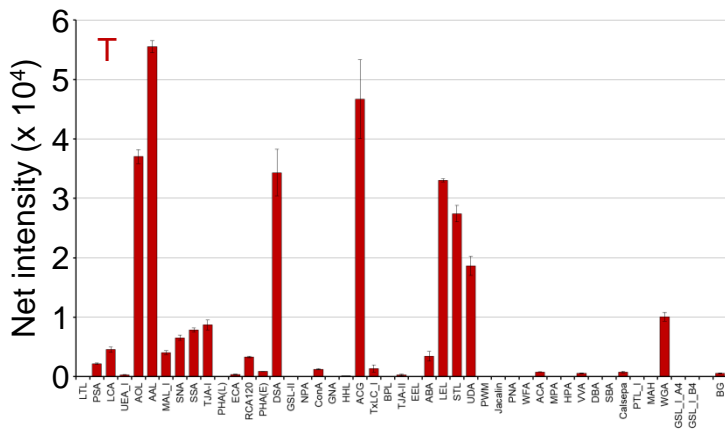
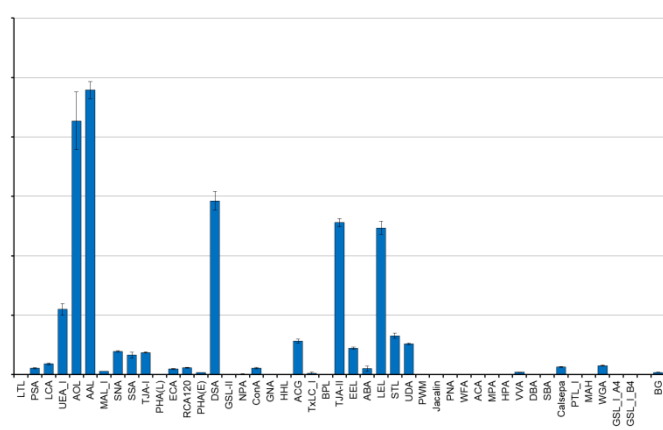
**Supplementary Figure 2. Western blot analysis for basigin immunoprecipitated from the cell membrane fractions of CFPAC-1.**

This *N*-glycoprotein was detected as high- and low-glycosylated forms in the input (I) and elution fraction (E) and not detected in the through fraction (T). After treatment of the immunoprecipitated basigin with peptide:*N*-glycanase (PNGase), the high-glycosylated form was decreased, and the non-glycosylated form became dominant.

Patient No. 8 (Blood type A)

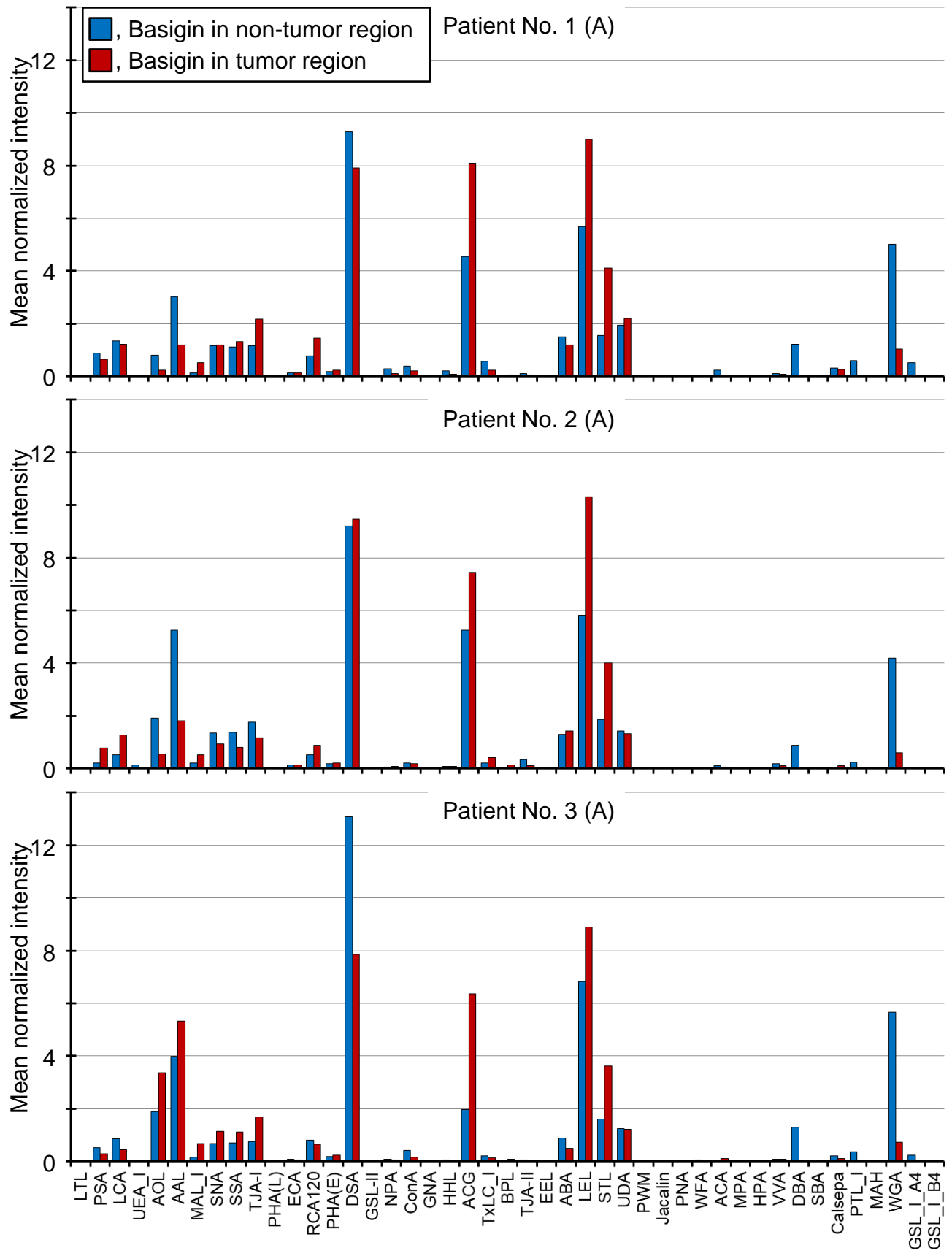


Patient No. 13 (Blood type O)

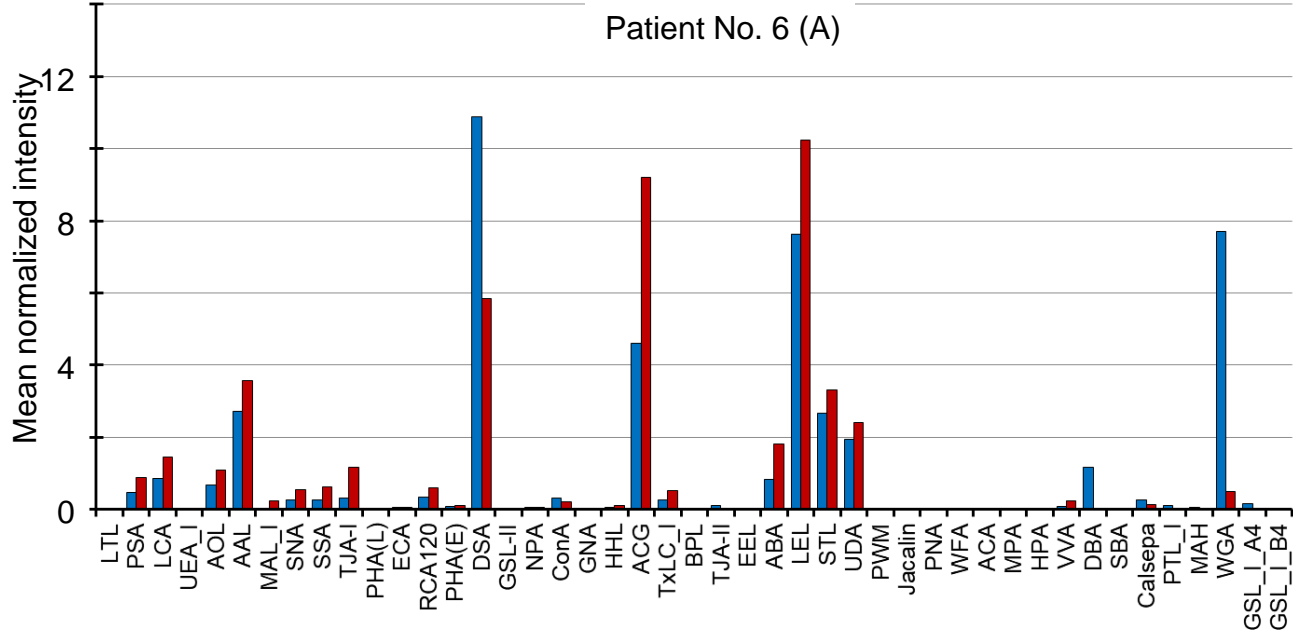
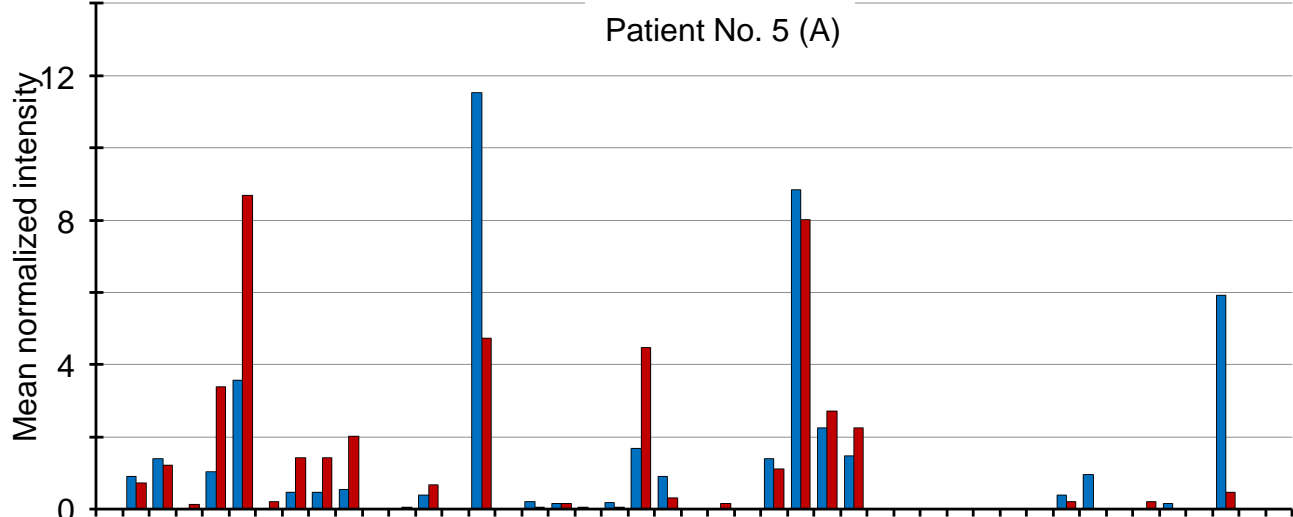
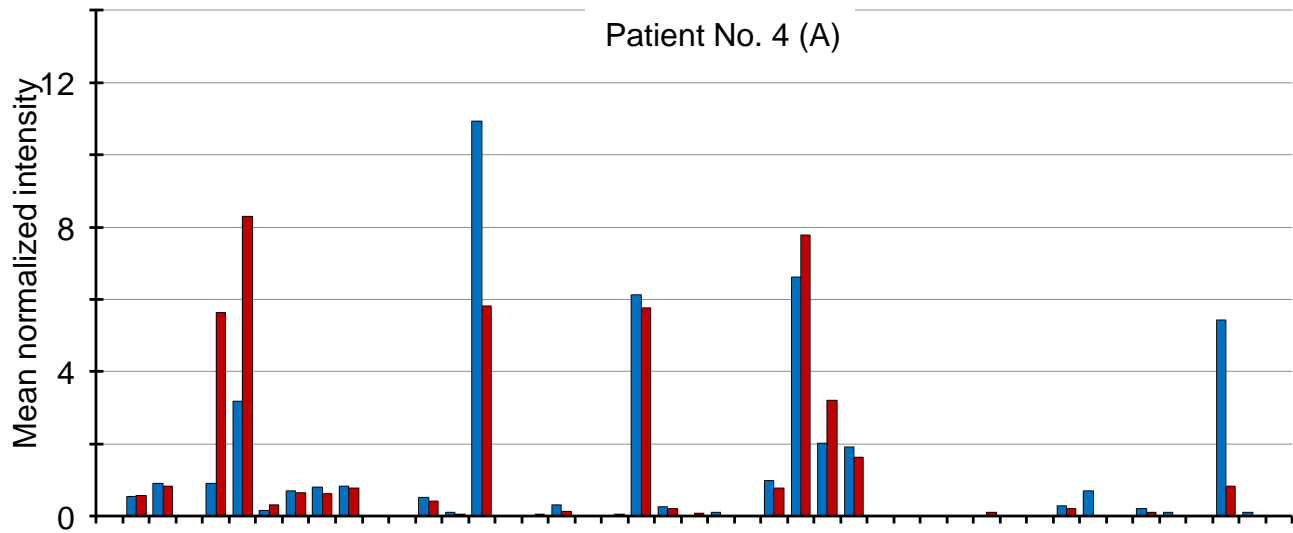


**Supplementary Figure 3. The glycan profiling of immunoprecipitated basigin from tissue extracts.** The typical glycan profiles of immunoprecipitated basigin indicated in Figure 5C. The signal values were applicable for differential analysis between tumor (T) and non-tumor (N) regions. There were no significant noises derived from the overlay antibody against basigin in the negative control (NC) without tissue samples.

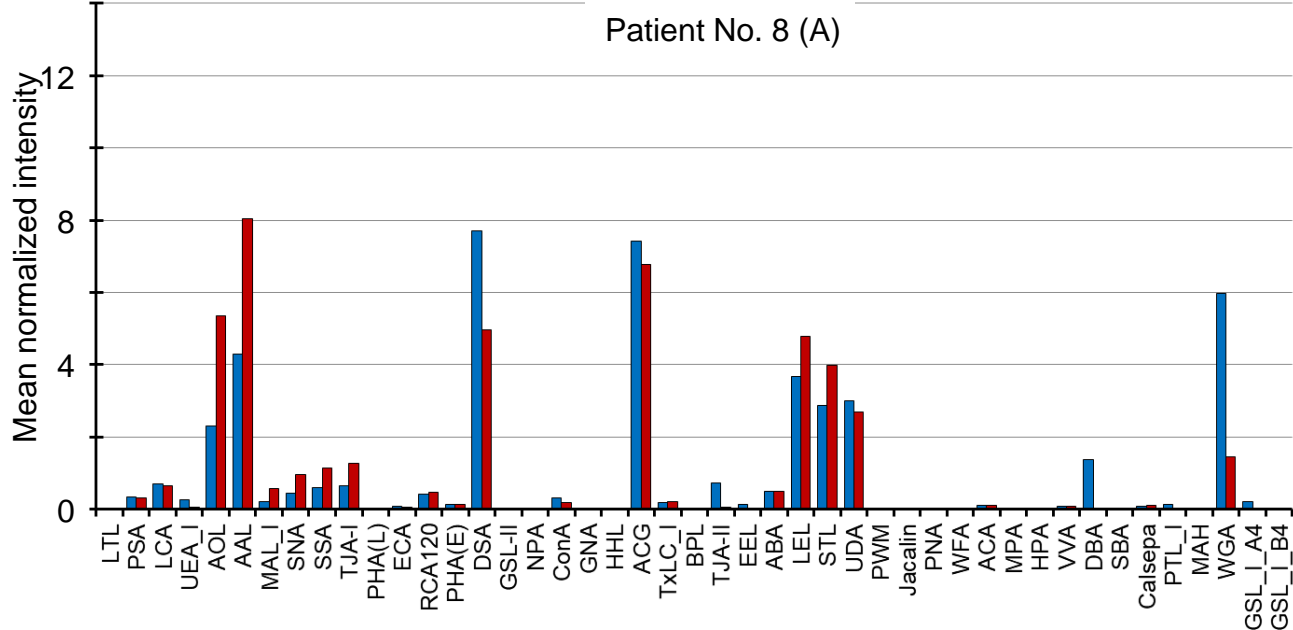
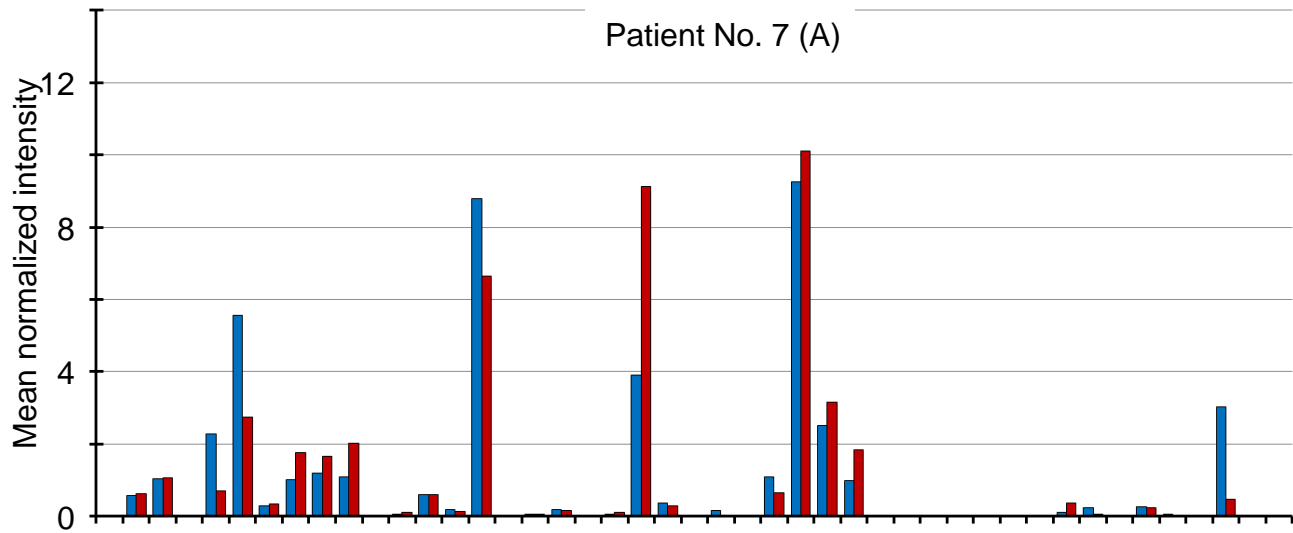
A



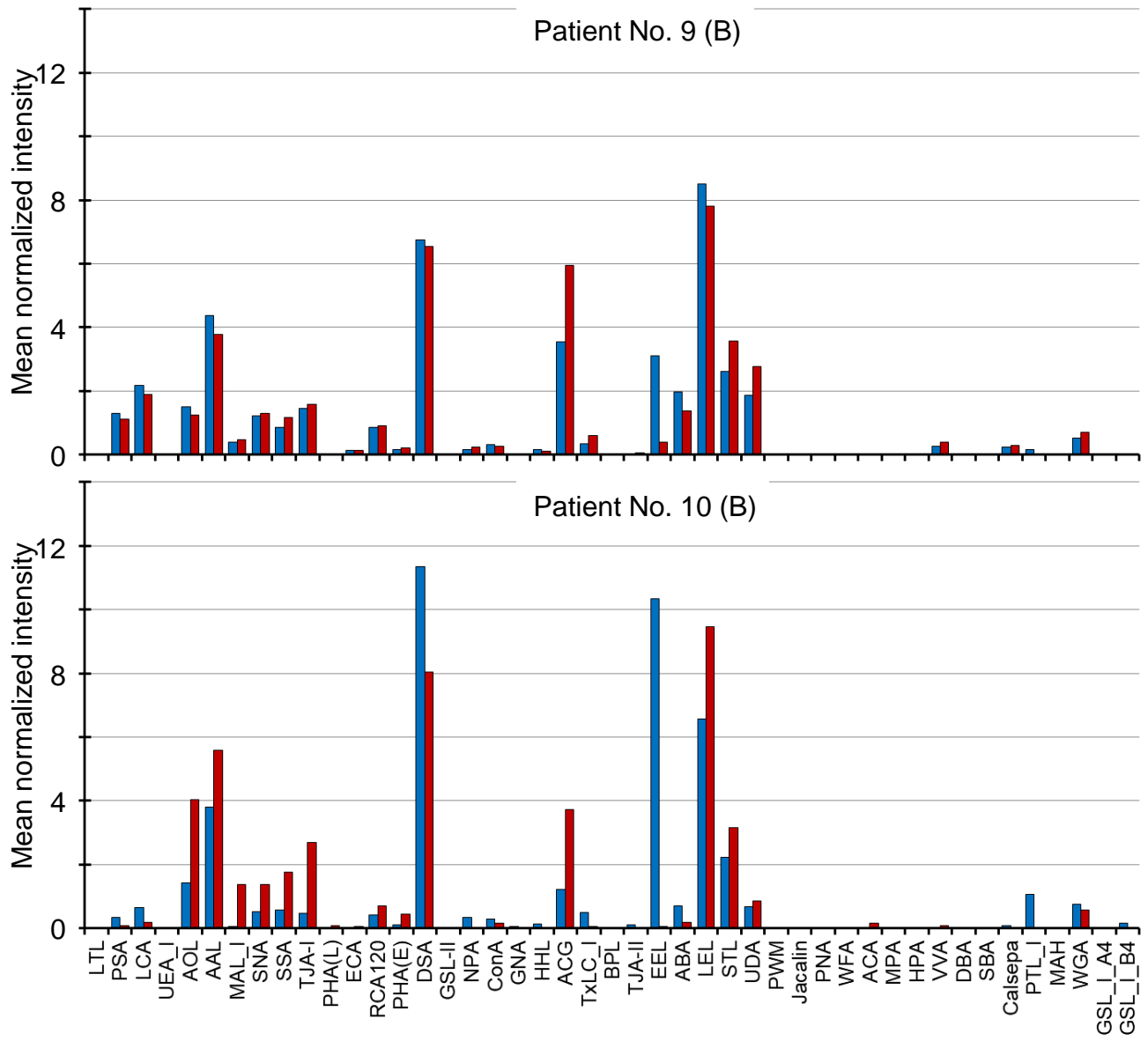
**Supplementary Figure 4. The glycan profiles of basigin immunoprecipitated from 14 PDAC tissues.** (A) Blood type A (Patient No. 1–8), (B) Blood type B (No. 9–10), (C) Blood type O (No. 11–13), and (D) Blood type AB (No.14). Blue, basigin obtained from non-tumor regions; Red, basigin obtained from tumor regions.

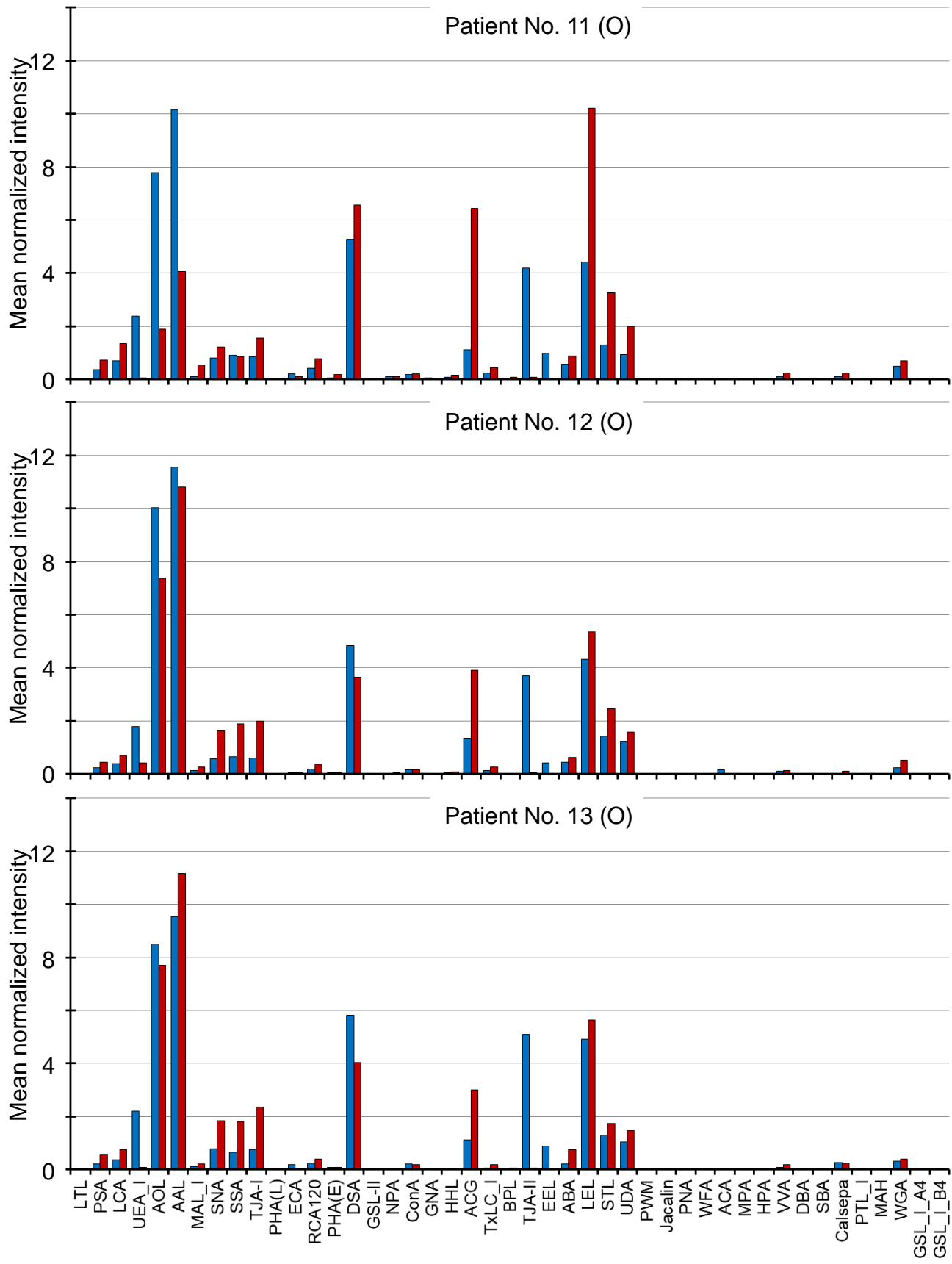


Supplementary Figure 4. Continued



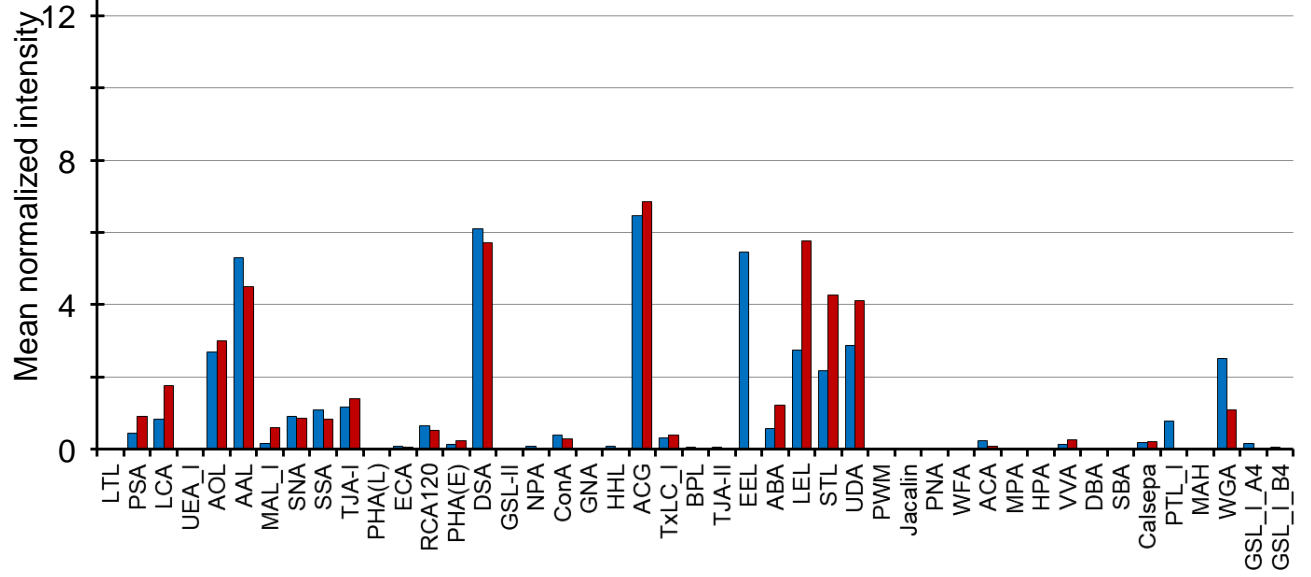
**Supplementary Figure 4. Continued**

**B****Supplementary Figure 4. Continued**

**C****Supplementary Figure 4. Continued**

D

Patient No. 14 (AB)



Supplementary Figure 4. Continued