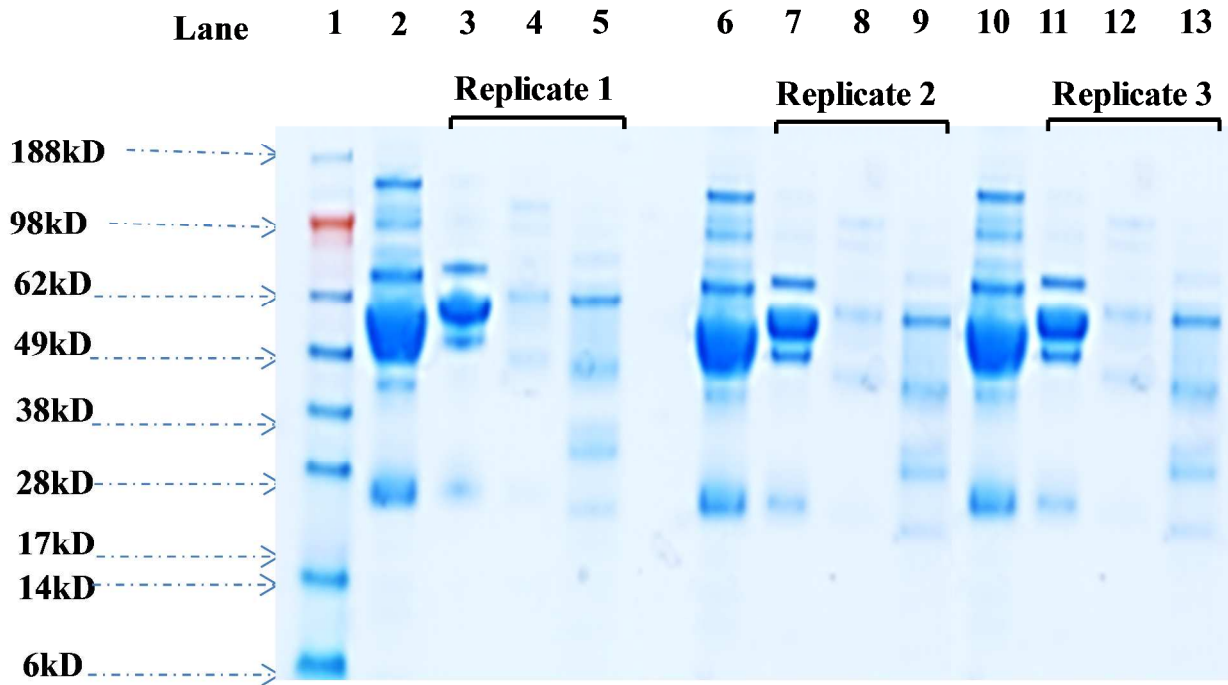


Associated Content

Supplementary Figure S1



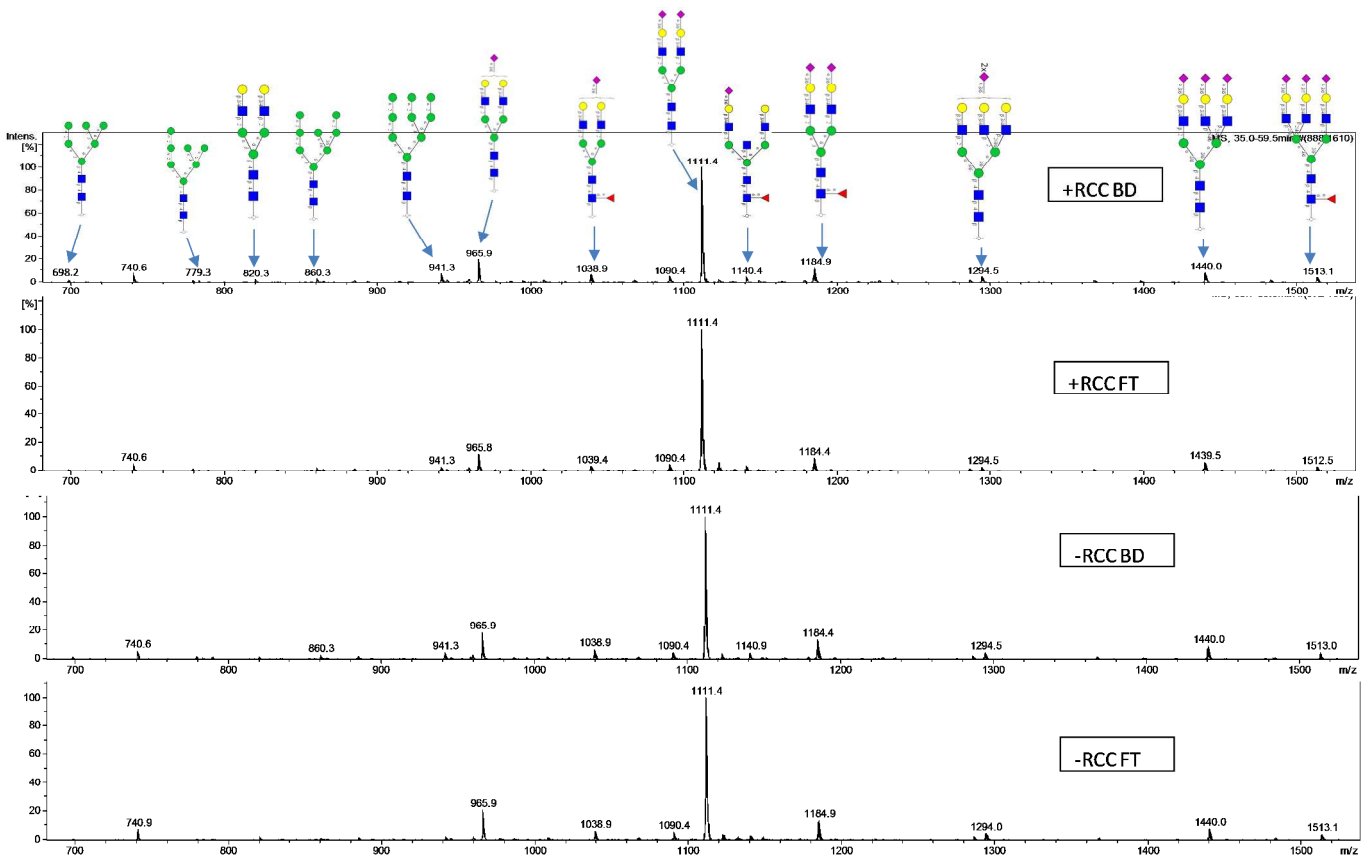
**Supp. Fig S1. ID SDS-PAGE analysis of reference plasma fractions from 12P-M-LAC platform to evaluate reproducibility.**

Equal amounts (2 $\mu$ g) of replicate samples were separated on a 4-12% NuPAGE gel as follows; reference plasma (lanes 2, 6 and 10),

12P bound fraction (lanes 3, 7 and 11), M-LAC bound fraction (lanes 4, 8 and 12), and M-LAC flow-through fraction (lanes 5, 9 and 13).

Lane 1 represents the molecular weight standard marker from Invitrogen (SeeBlue<sup>®</sup> Plus2 Prestained).

## Supplementary Figure S2



A representative average MS spectral of M-LAC bound and unbound fractions (~35-60min) m/z range 650-1600

**Supplementary Table S1: Patient information of ccRCC plasma samples, average age of patients is 52years**

Patient ID	Protocol number	Sex	Tumor size, cm	Clinical diagnosis
38	01-130	Female	8.5 x 6.3 x 6.0	ccRCC
46	01-130	Female	5.5 x 5.0 x 5.0	ccRCC
48	01-130	Male	7.2 x 4.0 x 3.0	ccRCC
50	01-130	Female	6.3 x 5.0 x 4.5	ccRCC
53	01-130	Male	8.0 x 7.0 x 6.0	ccRCC
62	01-130	Male	7.5 x 7.5 x 6.0	ccRCC
64	01-130	Female	8.2 x 8.0 x 7.2	ccRCC
75	01-130	Female	8.5 x 7.5 x 7.0	ccRCC
88	01-130	Female	3.5 x 3.5 x 3.5	ccRCC
108	01-130	Male	6.0 x 4.0 x 3.5	ccRCC
116	01-130	Male	7.5 x 4.5 x 3.0	ccRCC
124	01-130	Male	8.5 x 6.0 x 5.5	ccRCC
135	01-131	Female	5.5 x 4.0 x 3.0	ccRCC
170	01-132	Male	6.2 x 5.0 x 3.5	ccRCC
192	01-130	Female	8.0 x 4.5 x 4.0	ccRCC
223	01-130	Male	7.0 x 6.5 x 5.0	ccRCC
235	01-130	Female	4.5 x 4.5 x 3.0	ccRCC
251	01-130	Male	5.2 x 5.0 x 4.5	ccRCC
253	01-130	Male	4.7 x 4.2 x 4.0	ccRCC
261	01-130	Female	8.2 x 7.5 x 6.0	ccRCC

**Supplementary Table S3: Details of the number of total peptides and proteins identified from two analytical replicates**

**Proteomics**

Sample	Total peptides*	Total proteins
Disease (+RCC)	4063	159
Control (-RCC)	3112	151

**Glycoproteomics**

	M-LAC Unbound fraction		M-LAC Bound fraction	
Sample	Total peptides*	Total proteins	Total peptides*	Total proteins
Disease (+RCC)	3221	147	1598	86
Control (-RCC)	2404	125	1437	88

\*average spectral count of two analytical replicates, only proteins with  $\geq 2$  unique peptides are included in the data