

## Supplementary Material

### **Glycomic analysis of gastric carcinoma cells discloses glycans as modulators of RON receptor tyrosine kinase activation in cancer**

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### Supplementary table 1

Gene	Encoding for	Mock (N = 2)		ST3GAL4 (N = 2)		T-test
		Avg	SD	Avg	SD	
<i>MGAT3</i>	GNT-III	0.078	0.090	0.041	0.011	0.666
<i>MGAT5</i>	GNT-V	2.936	0.304	2.553	0.229	0.300
<i>ST6GAL1</i>	ST6Gal-I	10.505	3.385	8.686	0.923	0.584
<i>ST6GAL2</i>	ST6Gal-II	0.000	0.000	0.000	0.000	
<i>MST1R</i>	RON	15.374	1.052	15.391	0.507	0.987
<i>ACTB</i>	Beta-actin	737.975	53.375	852.531	64.743	0.198
<i>GAPDH</i>	GAPDH	1154.628	84.734	1283.145	115.757	0.342
<i>TUBB</i>	Tubulin beta chain	126.554	3.703	110.503	4.211	0.057

### Supplementary table 1: RNASeq of selected genes

Selected target genes assessed by quantitative RNASeq data analysis of ST3GAL4 overexpressing cells and the mock transfected control. Read counts of each RNASeq experiment were normalized to the total number of reads and are represented as average (Avg) and standard deviation (SD) of the two biological replicates. The selected target genes show no significant alterations ( $p < 0.05$ ). Statistical significance was calculated by the two-tailed, unpaired t-test.

## Supplementary table 2

Case	Type	RON	SLe <sup>x</sup>	PLA
1	Intestinal	++	++	+
2		++	-	na
3		+	+	na
4		++	-	na
5		++	++	++
6		++	+	+
7		++	+	+
8		+	+	+
9		+	+	na
10		+	+	+
11	Diffuse	+	+	++
12		+	++	na
13		+	-	na
14		+	+	na
15		+	+	+
Total	+	60%	60%	75%
	++	40%	20%	25%
	++ and +	100%	80%	100%

### Supplementary table 2: Gastric tumor samples

15 paraffin embedded tumor samples were examined for the expression of RON and SLe<sup>x</sup> and classified according to the strength of their IHC staining. 6 intestinal type cases and 2 diffuse type cases were selected for further analysis of RON-SLe<sup>x</sup> colocalization by *in situ* proximity ligation assay. All cases showed colocalization with two cases being highly positive. Each case contained non-cancerous, adjacent mucosa which acted as an internal negative control for the PLA experiments and which were exclusively negative. Staining strength and distribution was classified in -: negative; +: positive; ++: very positive. na: not analyzed.