Fasting & Refeeding study (Fig. 3a-d, f-k)

Using Two Way Analysis of Variance (SigmaPlot Software) All Pairwise Multiple Comparison Procedures (Holm-Sidak method): Overall significance level = 0.05

Fig. 3a Liver TG

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Com	parisons	tor	tactor:	miK

Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	21.243	3.933	0.001	Yes

Fig. 3b Liver TC

Comparisons for factor: **Feed**

Comparison	Diff of Means	t	P	P<0.050
Refed vs. Fasting	1.116	3.947	0.001	Yes

Comparisons for factor: miR

Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	1.000	3.537	0.003	Yes

Fig. 3c Serum TG

Comparison	Diff of Means	t	P	P<0.050
Fasting vs. Refed	0.298	8.163	< 0.001	Yes

Comparisons for factor: miR

Comparison	Diff of Means	t	P	P<0.050
miR-NC vs. miR-Sec22b	0.539	14.767	< 0.001	Yes

Comparisons for factor: miR within Fasting

Comparison	Diff of Means	t	P	P<0.050
miR-NC vs. miR-Sec22b	0.886	17.168	< 0.001	Yes

Comparisons for factor: miR within Refed

Comparison	Diff of Means	t	P	P<0.050
miR-NC vs. miR-Sec22b	0.192	3.716	0.002	Yes

Comparisons for factor: Feed within miR-NC $\,$

Comparison	Diff of Means	t	P	P<0.050
Fasting vs. Refed	0.645	12.498	< 0.001	Yes

Comparisons for factor: Feed within miR-Sec22b

Comparison	Diff of Means	t	P	P<0.050
Refed vs. Fasting	0.0492	0.954	0.354	No

Fig. 3d Serum TC

Comparisons for factor: Feed

ComparisonDiff of MeanstPP<0.050</th>Refed vs. Fasting18.1262.8170.012Yes

Comparisons for factor: miR

 Comparison
 Diff of Means
 t
 P
 P<0.050</th>

 miR-NC vs. miR-Sec22b
 88.290
 13.723
 <0.001</td>
 Yes

Fig. 3f Serum C10:1

ComparisonDiff of MeanstPP<0.050</th>Fasting vs. Refed0.042613.097<0.001</td>Yes

Comparisons for factor: miR

Comparison
miR-Sec22b vs. miR-NCDiff of Means
0.0130t
4.007PP<0.050
0.001

Comparisons for factor: miR within Fasting

Comparison
miR-Sec22b vs. miR-NCDiff of Means
0.0260t
5.494P<0.050
4001Yes

Comparisons for factor: miR within Refed

 Comparison
 Diff of Means
 t
 P
 P<0.050</th>

 miR-Sec22b vs. miR-NC
 0.0000640
 0.0143
 0.989
 No

Comparisons for factor: Feed within miR-NC

ComparisonDiff of MeanstPP<0.050</th>Fasting vs. Refed0.02976.260<0.001</td>Yes

Comparisons for factor: Feed within miR-Sec22b

Comparison Diff of Means t P P<0.050

Fasting vs. Refed 0.0556 12.453 < 0.001 Yes

Fig. 3g Serum C12

ComparisonDiff of MeanstPP<0.050</th>Fasting vs. Refed0.04649.909<0.001</td>Yes

Comparisons for factor: miR

 Comparison
 Diff of Means
 t
 P
 P<0.050</th>

 miR-Sec22b vs. miR-NC
 0.00940
 2.007
 0.063
 No

Comparisons for factor: miR within Fasting

 Comparison
 Diff of Means
 t
 P
 P<0.050</th>

 miR-Sec22b vs. miR-NC
 0.0208
 3.059
 0.008
 Yes

Comparisons for factor: miR within Refed

Comparison miR-NC vs. miR-Sec22b	Diff of Means 0.00205	t 0.319	P 0.754	P<0.050 No
Comparisons for factor: Fectors Festing vs. Refed	ed within miR-N Diff of Means 0.0350	t 5.130	P <0.001	P<0.050 Yes
Comparisons for factor: Fe Comparison Fasting vs. Refed	ed within miR-S Diff of Means 0.0579	ec22b t 9.004	P <0.001	P<0.050 Yes
Fig. 3h Serum C14:1				
Comparisons for factor: Fe Comparison Diff Fasting vs. Refed	f of Means		P P 0.001	< 0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R Diff of Means 0.0311	t 3.165	P 0.006	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within Fasting Diff of Means 0.0706	t 4.941	P <0.001	P<0.050 Yes
Comparisons for factor: mi Comparison miR-NC vs. miR-Sec22b	R within Refed Diff of Means 0.00845	t 0.627	P 0.540	P<0.050 No
Comparisons for factor: Fe Comparison Fasting vs. Refed		t 6.223	P <0.001	P<0.050 Yes
Comparisons for factor: Fe Comparison Fasting vs. Refed	ed within miR-S Diff of Means 0.168	ec22b t 12.468	P <0.001	P<0.050 Yes
Fig. 3i Serum Ala				
-	f of Means	t I		0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R Diff of Means 156.298	t 2.877	P 0.012	P<0.050 Yes
Comparisons for factor: mi Comparison	R within Fasting Diff of Means	g t	P	P<0.050

miR-NC vs. miR-Sec22b	28.902	0.366	0.720	No
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC		t 4.582	P <0.001	P<0.050 Yes
Comparisons for factor: Fe Comparison Refed vs. Fasting	ed within miR-NC Diff of Means 198.420	t 2.510	P 0.024	P<0.050 Yes
Comparisons for factor: Fe Comparison Refed vs. Fasting	ed within miR-Sec2 Diff of Means 568.819	22b t 7.632	P <0.001	P<0.050 Yes
Fig. 3j Serum Gly				
Comparisons for factor: Fe Comparison Diff Refed vs. Fasting				0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R Diff of Means 120.129	t 5.539	P <0.001	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within Fasting Diff of Means 62.818	t 1.990	P 0.065	P<0.050 No
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within Refed Diff of Means 177.440	t 5.964	P <0.001	P<0.050 Yes
Comparisons for factor: Fe Comparison Refed vs. Fasting	ed within miR-NC Diff of Means 37.742	t 1.196	P 0.250	P<0.050 No
Comparisons for factor: Fee Comparison Refed vs. Fasting	ed within miR-Sec Diff of Means 152.365	22b t 5.121	P <0.001	P<0.050 Yes
Fig. 3k Serum Orn				
Comparisons for factor: Fee Comparison Diff Refed vs. Fasting	ed f of Means t 59.534 1.6	I 51 0.1	P P<0.	
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R Diff of Means 203.073	t 5.632	P <0.001	P<0.050 Yes

Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	107.708	2.053	0.058	No
Comparisons for factor: m	niR within Refed			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	298.438	6.033	< 0.001	Yes
Commonisons for footon E	1 1/11 15 31/	~		
Comparisons for factor: F	eed within miR-N(ز		
Comparison	eed within miR-NC Diff of Means	t t	P	P<0.050
-			P 0.505	P<0.050 No
Comparison	Diff of Means 35.831	t 0.683	_	
Comparison Fasting vs. Refed	Diff of Means 35.831	t 0.683	_	

Refeeding SEC22B re-introduction study (Fig. 3l-n, p, r-u)

Using Two Way Analysis of Variance (SigmaPlot Software) All Pairwise Multiple Comparison Procedures (Holm-Sidak method): Overall significance level = 0.05

Fig. 3l Serum Ala

Comparisons for factor: cD Comparison WT vs. GFP	NA within miR-N Diff of Means 86.349	t 1.220	P 0.240	P<0.050 No
Comparisons for factor: cD Comparison GFP vs. WT	NA within miR-S Diff of Means 153.997	ec22b t 2.176	P 0.045	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within GFP Diff of Means 257.011	t 3.632	P 0.002	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within WT Diff of Means 16.666	t 0.236	P 0.817	P<0.050 No
Fig. 3m Serum Gly				
Comparisons for factor: cD Comparison WT vs. GFP	NA within miR-N Diff of Means 16.275	t 0.836	P 0.415	P<0.050 No
Comparisons for factor: cD		ec22b		
Comparison GFP vs. WT	Diff of Means 86.432	t 4.442	P <0.001	P<0.050 Yes
Comparisons for factor: mi. Comparison miR-Sec22b vs. miR-NC	R within GFP Diff of Means 123.200	t 6.331	P <0.001	P<0.050 Yes
Comparisons for factor: mi. Comparison miR-Sec22b vs. miR-NC		t 1.053	P 0.308	P<0.050 No
Fig. 3n Serum Orn				
Comparisons for factor: cD Comparison WT vs. GFP	NA within miR-N Diff of Means 5.542	t 0.702	P 0.493	P<0.050 No

Comparisons for factor: cD l Comparison GFP vs. WT	NA within miR-Sec Diff of Means 30.822	t 3.903	P 0.001	P<0.050 Yes
Comparisons for factor: mil Comparison miR-Sec22b vs. miR-NC	R within GFP Diff of Means 25.530	t 3.232	P 0.005	P<0.050 Yes
Comparisons for factor: mil Comparison miR-NC vs. miR-Sec22b	R within WT Diff of Means 10.835	t 1.372	P 0.189	P<0.050 No
Fig. 3p Normalized SEC22	<u> 2B</u>			
Comparisons for factor: cD ! Comparison WT vs. GFP	NA within miR-NO Diff of Means 1.280	t 10.820	P <0.001	P<0.050 Yes
Comparisons for factor: cDl Comparison WT vs. GFP	NA within miR-Sec Diff of Means 0.739	c22b t 6.245	P <0.001	P<0.050 Yes
Comparisons for factor: mil Comparison miR-NC vs. miR-Sec22b	R within GFP Diff of Means 0.790	t 6.676	P <0.001	P<0.050 Yes
Comparisons for factor: mil Comparison miR-NC vs. miR-Sec22b	R within WT Diff of Means 1.331	t 11.251	P <0.001	P<0.050 Yes
Fig. 3r Serum TG				
Comparisons for factor: cD l Comparison WT vs. GFP	NA within miR-NO Diff of Means 0.0678	t 0.530	P 0.604	P<0.050 No
Comparisons for factor: cD l Comparison WT vs. GFP	NA within miR-Sec Diff of Means 0.681	c22b t 5.322	P <0.001	P<0.050 Yes
Comparisons for factor: mil Comparison miR-NC vs. miR-Sec22b	R within GFP Diff of Means 0.373	t 2.917	P 0.010	P<0.050 Yes
Comparisons for factor: mil Comparison miR-Sec22b vs. miR-NC	R within WT Diff of Means 0.240	t 1.875	P 0.079	P<0.050 No

Fig. 3s Serum TC

Comparisons for factor: cD Comparison GFP vs. WT	NA within miR-N Diff of Means 23.242	C t 2.348	P 0.032	P<0.050 Yes
Comparisons for factor: cD Comparison WT vs. GFP	NA within miR-So Diff of Means 70.255	ec 22b t 7.096	P <0.001	P<0.050 Yes
Comparisons for factor: mi Comparison miR-NC vs. miR-Sec22b	R within GFP Diff of Means 112.243	t 11.337	P <0.001	P<0.050 Yes
Comparisons for factor: mi Comparison miR-NC vs. miR-Sec22b	R within WT Diff of Means 18.746	t 1.893	P 0.077	P<0.050 No
Fig. 3t Serum ALT				
Comparisons for factor: cD Comparison GFP vs. WT	NA within miR-N Diff of Means 5.206	C t 0.383	P 0.707	P<0.050 No
Comparisons for factor: cD Comparison GFP vs. WT	NA within miR-So Diff of Means 66.984	ec22b t 4.928	P <0.001	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within GFP Diff of Means 73.144	t 5.381	P <0.001	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC		t 0.836	P 0.415	P<0.050 No
Fig. 3u Serum AST				
Comparisons for factor: cD Comparison GFP vs. WT	NA within miR-N Diff of Means 4.440	C t 0.259	P 0.799	P<0.050 No
Comparisons for factor: cD Comparison GFP vs. WT	NA within miR-So Diff of Means 51.448	ec22b t 2.999	P 0.009	P<0.050 Yes
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within GFP Diff of Means 69.056	t 4.025	P <0.001	P<0.050 Yes

Comparisons for factor: miR within WT

Comparison
Diff of Means
t
P
miR-Sec22b vs. miR-NC 22.049 1.285 0.217 No P<0.050

Acute glucagon SEC22B knockdown (KD) study (Fig. 4b-j)

Using Two Way Analysis of Variance (SigmaPlot Software) All Pairwise Multiple Comparison Procedures (Holm-Sidak method): Overall significance level = 0.05

Fig. 4b Liver p-PKA motif quantification

	or factor: Inj (Inje Diff of Means 597869.400	ection) t 4.516	P <0.001	P<0.050 Yes
Fig. 4c Liver T	<u> </u>			
Comparisons for Comparison KD vs. NC	or factor: AAV Diff of Means 13.440	t 3.720	P 0.002	P<0.050 Yes
Fig. 4d serum	<u>TG</u>			
Comparisons for Comparison NC vs. KD		t 3.476	P 0.003	P<0.050 Yes
Comparisons for Comparison VEH vs. GCG	or factor: Inj Diff of Means 0.394	t 2.383	P 0.030	P<0.050 Yes
Fig. 4e serum	<u>Ala</u>			
Comparisons for Comparison KD vs. NC	or factor: miR Diff of Means 49.491	t 2.450	P 0.026	P<0.050 Yes
Comparisons for Comparison VEH vs. GCG	or factor: Inj Diff of Means 2.291	t 0.113	P 0.911	P<0.050 No
Comparisons for Comparison VEH vs. GCG	or factor: Inj with i Diff of Means 25.600	in NC t 0.896	P 0.383	P<0.050 No
Comparisons for Comparison GCG vs. VEH	or factor: Inj with i Diff of Means 21.018	in KD t 0.736	P 0.473	P<0.050 No
Comparisons for Comparison KD vs. NC	or factor: miR with Diff of Means 26.182	hin VEH t 0.917	P 0.373	P<0.050 No

-	For factor: miR with Diff of Means 72.800	hin GCG t 2.548	P 0.021	P<0.050 Yes
Fig. 4e serum	Gly			
Comparisons f Comparison KD vs. NC		t 2.450	P 0.026	P<0.050 Yes
Comparisons f Comparison VEH vs. GCG	Diff of Means	t 0.113	P 0.911	P<0.050 No
Comparisons f Comparison VEH vs. GCG	For factor: Inj with Diff of Means 25.600	in NC t 0.896	P 0.383	P<0.050 No
	For factor: Inj with Diff of Means 21.018	in KD t 0.736	P 0.473	P<0.050 No
Comparisons f Comparison KD vs. NC	For factor: miR wit Diff of Means 26.182	hin VEH t 0.917	P 0.373	P<0.050 No
Comparisons f Comparison KD vs. NC	For factor: miR with Diff of Means 72.800	hin GCG t 2.548	P 0.021	P<0.050 Yes
Fig. 4g serum	<u>Orn</u>			
Comparisons f Comparison KD vs. NC	For factor: miR Diff of Means 66.339	t 2.916	P 0.010	P<0.050 Yes
Comparisons f Comparison GCG vs. VEH	Diff of Means	t 3.255	P 0.005	P<0.050 Yes
Comparisons f Comparison GCG vs. VEH	For factor: Inj with Diff of Means 28.512	in NC t 0.886	P 0.389	P<0.050 No
Comparisons f Comparison GCG vs. VEH	For factor: Inj with Diff of Means 119.629	in KD t 3.718	P 0.002	P<0.050 Yes

	or factor: miR with Diff of Means 20.781	t 0.646	P 0.528	P<0.050 No
Comparisons for Comparison KD vs. NC	or factor: miR with Diff of Means 111.898	t 3.477	P 0.003	P<0.050 Yes
Fig. 4h serum	<u>Cit</u>			
Comparisons for Comparison KD vs. NC		t 3.314	P 0.004	P<0.050 Yes
Comparisons for Comparison VEH vs. GCG		t 1.467	P 0.162	P<0.050 No
	or factor: Inj withi Diff of Means 5.184	n NC t 1.868	P 0.080	P<0.050 No
Comparisons for Comparison VEH vs. GCG	or factor: Inj withi Diff of Means 0.572	n KD t 0.206	P 0.839	P<0.050 No
Comparisons for Comparison KD vs. NC	or factor: miR with Diff of Means 4.195	t 1.512	P 0.150	P<0.050 No
	or factor: miR with Diff of Means 8.807		P 0.006	P<0.050 Yes
Fig. 4j serum	<u>Val</u>			
Comparisons for Comparison KD vs. NC	or factor: miR Diff of Means 54.880	t 4.491	P <0.001	P<0.050 Yes
Comparisons for Comparison GCG vs. VEH		t 6.171	P <0.001	P<0.050 Yes
	or factor: Inj withi Diff of Means 57.107	n NC t 3.305	P 0.004	P<0.050 Yes

	or factor: Inj with i Diff of Means 93.715	t 5.423	P <0.001	P<0.050 Yes
Comparisons for Comparison KD vs. NC	or factor: miR wit l Diff of Means 36.576	hin VEH t 2.117	P 0.050	P<0.050 No
Comparisons for Comparison KD vs. NC	or factor: miR wit l Diff of Means 73.184	hin GCG t 4.235	P <0.001	P<0.050 Yes
Fig. 4i serum I	Leu/Ile			
Comparisons for Comparison KD vs. NC	or factor: miR Diff of Means 113.491	t 2.784	P 0.013	P<0.050 Yes
Comparisons for Comparison GCG vs. VEH	or factor: Inj Diff of Means 140.992	t 3.459	P 0.003	P<0.050 Yes
Comparisons for Comparison GCG vs. VEH	or factor: Inj with i Diff of Means 79.942	in NC t 1.387	P 0.184	P<0.050 No
Comparisons for Comparison GCG vs. VEH	or factor: Inj withi Diff of Means 202.042	in KD t 3.505	P 0.003	P<0.050 Yes
	or factor: miR with Diff of Means 52.442		P 0.376	P<0.050 No
Comparisons for Comparison KD vs. NC	or factor: miR wit l Diff of Means 174.541	hin GCG t 3.028	P 0.008	P<0.050 Yes

Chronic glucagon SEC22B S137A study (Fig. 4k-l, n-u)

Using Two Way Analysis of Variance (SigmaPlot Software) All Pairwise Multiple Comparison Procedures (Holm-Sidak method): Overall significance level = 0.05

Fig. 4k liver glycogen

Comparisons for factor: cD	NA within miR-N	IC		
Comparison	Diff of Means	t	P	P<0.050
WT vs. GFP	81.205	2.026	0.147	No
WT vs. S-A	74.863	1.867	0.138	No
S-A vs. GFP	6.342	0.158	0.875	No
		0.120		
Comparisons for factor: cD				
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	176.355	4.399	< 0.001	Yes
S-A vs. WT	111.948	2.792	0.018	Yes
GFP vs. S-A	64.407	1.607	0.119	No
Comparisons for factor: mi	R within GFP			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	196.048	4.890	< 0.001	Yes
Comparisons for factor: mi	R within WT			
Comparison	Diff of Means	t	P	P<0.050
miR-NC vs. miR-Sec22b	61.512	1.534	0.135	No
Comparisons for factor: mi	R within S-A			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	125.300	3.125	0.004	Yes
Fig. 4l serum urea				
Comparisons for factor: cD	NA within miR-N	IC		
Comparison	Diff of Means	t	P	P<0.050
WT vs. S-A	5.682	1.253	0.525	No
WT vs. GFP	5.178	1.142	0.456	No
GFP vs. S-A	0.503	0.111	0.912	No
Comparisons for factor: cD	NA within miR-S	ec22b		
Comparison	Diff of Means	t	P	P<0.050
S-A vs. WT	11.153	2.460	0.058	No
GFP vs. WT	10.910	2.406	0.044	Yes
S-A vs. GFP	0.243	0.0537	0.958	No
				- 1.4
Comparisons for factor: mi	R within GFP			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	16.037	3.537	0.001	Yes

Comparisons for factor: mi Comparison miR-NC vs. miR-Sec22b	R within WT Diff of Means 0.0517	t 0.0114	P 0.991	P<0.050 No
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within S-A Diff of Means 16.783	t 3.702	P <0.001	P<0.050 Yes
Fig. 4n serum Ala				
Comparisons for factor: cD	NA within miR-N	IC		
Comparison	Diff of Means	t	P	P<0.050
S-A vs. WT	6.538	0.131	0.999	No
S-A vs. GFP	5.607	0.112	0.999	No
GFP vs. WT	0.931	0.0187	0.999	No
Comparisons for factor: cD	NA within miR-S	ec22b		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	152.931	3.066	0.014	Yes
GFP vs. S-A	85.168	1.707	0.187	No
S-A vs. WT	67.763	1.358	0.187	No
Comparisons for factor: mi	R within GFP			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	202.267	4.055	< 0.001	Yes
Comparisons for factor: mi				
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	50.267	1.008	0.322	No
Comparisons for factor: mi			_	
Comparison		t	P	P<0.050
miR-Sec22b vs. miR-NC	111.492	2.235	0.033	Yes
Fig. 4o serum Gly				
Comparisons for factor: cD	NA within miR-N	IC		
Comparison	Diff of Means	t	P	P<0.050
WT vs. GFP	33.454	1.081	0.639	No
WT vs. S-A	19.552	0.632	0.781	No
S-A vs. GFP	13.902	0.449	0.781	No
Comparisons for factor: cD		ec22b		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	84.784	2.741	0.030	Yes
GFP vs. S-A	48.448	1.566	0.239	No
S-A vs. WT	36.336	1.175	0.249	No

Comparisons for factor: miR within GFP

Comparison miR-Sec22b vs. miR-NC	Diff of Means 165.710	t 5.356	P <0.001	P<0.050 Yes
Comparison for factor: micromparison miR-Sec22b vs. miR-NC	iR within WT Diff of Means 47.472	t 1.534	P 0.135	P<0.050 No
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	iR within S-A Diff of Means 103.360	t 3.341	P 0.002	P<0.050 Yes
Fig. 4p serum Orn				
Comparisons for factor: cD	NA within miR-N	IC		
Comparison GFP vs. WT GFP vs. S-A S-A vs. WT	Diff of Means 20.823 11.333 9.490	t 0.645 0.351 0.294	P 0.892 0.926 0.926	P<0.050 No No No
Comparisons for factor: cD				
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	133.521	4.139	< 0.001	Yes
GFP vs. S-A S-A vs. WT	100.863 32.658	3.127 1.012	0.008 0.319	Yes No
5 11 vs. w 1	32.030	1.012	0.317	110
Comparisons for factor: mi		4		D 0.050
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	155.746	4.828	< 0.001	Yes
Comparisons for factor: mi				
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	43.048	1.334	0.192	No
Comparisons for factor: mi	iR within S-A			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	66.215	2.053	0.049	Yes
Fig. 4q serum Cit				
Comparisons for factor: cD	NA within miR-N	IC.		
Comparison Comparison	Diff of Means	t	P	P<0.050
WT vs. GFP	4.732	0.691	0.871	No
WT vs. S-A	3.592	0.524	0.871	No
S-A vs. GFP	1.140	0.166	0.871	No
Comparisons for factor: cD	NA within miR-S	ec22b		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	30.765	4.490	< 0.001	Yes
S-A vs. WT	16.850	2.459	0.039	Yes
GFP vs. S-A	13.916	2.031	0.039	No

Comparison for factor: mic Comparison miR-Sec22b vs. miR-NC	iR within GFP Diff of Means 43.141	t 6.297	P <0.001	P<0.050 Yes
Comparisons for factor: mi	iR within WT			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	7.643	1.116	0.273	No
Comparisons for factor: mi	iR within S-A			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	28.085	4.099	< 0.001	Yes
Fig. 4r serum Val				
Comparisons for factor: cD	NA within miR-N	IC		
Comparison	Diff of Means	t	P	P<0.050
WT vs. S-A	3.808	0.159	0.998	No
GFP vs. S-A	3.554	0.148	0.998	No
WT vs. GFP	0.254	0.0106	0.998	No
Comparisons for factor: cD	NA within miR-S	ec22h		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	100.299	4.184	< 0.001	Yes
S-A vs. WT	63.765	2.660	0.025	Yes
GFP vs. S-A	36.533	1.524	0.138	No
Comparisons for factor: mi	iR within GFP			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	128.324	5.353	< 0.001	Yes
Comparisons for factor: mi	iR within WT			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	27.771	1.158	0.256	No
Comparisons for factor: mi	iR within S-A			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	95.344	3.977	< 0.001	Yes
Fig. 4s serum Leu/Ile				
Comparisons for factor: cD			-	D 6 6 5 5
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT S-A vs. WT	4.464	0.130 0.0732	0.999	No No
GFP vs. S-A	2.512 1.952	0.0732	0.999 0.999	No No
OF 1 VS. S-A	1.734	0.0303	ひ、オブブ	TNO
Comparisons for factor: cE		ec22b		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT				
S-A vs. WT	130.000 89.152	3.791 2.600	0.002 0.028	Yes Yes

GFP vs. S-A	40.848	1.191	0.243	No
Comparisons for factor: mi Comparison miR-Sec22b vs. miR-NC	R within GFP Diff of Means 155.888	t 4.546	P <0.001	P<0.050 Yes
Comparison for factor: mi Comparison miR-Sec22b vs. miR-NC	R within WT Diff of Means 30.352	t 0.885	P 0.383	P<0.050 No
Comparisons for factor: micromparison miR-Sec22b vs. miR-NC	R within S-A Diff of Means 116.992	t 3.411	P 0.002	P<0.050 Yes
Fig. 4t liver TG				
Comparisons for factor: cD	NA within miR-	-NC		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. WT	5.091	2.262	0.091	No
GFP vs. S-A	3.172	1.409	0.310	No
S-A vs. WT	1.919	0.853	0.401	No
Comparisons for factor: cD	NA within miR-	-Sec22b		
Comparison	Diff of Means	t	P	P<0.050
GFP vs. S-A	29.173	12.960	< 0.001	Yes
GFP vs. WT	27.469	12.203	< 0.001	Yes
WT vs. S-A	1.704	0.757	0.455	No
W 1 VS. 5-A	1.704	0.737	0.433	110
Comparisons for factor: mi	R within GFP			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	26.933	11.964	< 0.001	Yes
mik-scc220 vs. mik-ive	20.933	11.504	<0.001	105
Comparisons for factor: mi	R within WT			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	4.554	2.023	0.052	No
marc 500220 vs. marc 1ve	1.55	2.023	0.052	110
Comparisons for factor: mi	R within S-A			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	0.931 0.413	0.682 No		
Fig. 4u serum TG				
Comparisons for factor: cD		-NC		
Comparison	Diff of Means	t	P	P<0.050
WT vs. GFP	0.452	1.505	0.370	No
S-A vs. GFP	0.276	0.921	0.596	No
WT vs. S-A	0.175	0.585	0.563	No
Comparisons for factor: cD			-	D 0.050
Comparison	Diff of Means	t	P	P<0.050

S-A vs. GFP	1.916	6.387	< 0.001	Yes
S-A vs. WT	1.144	3.815	0.001	Yes
WT vs. GFP	0.771	2.572	0.015	Yes
Comparisons for factor: mi	iR within GFP			
Comparison	Diff of Means	t	P	P<0.050
miR-NC vs. miR-Sec22b	0.125	0.418	0.679	No
Comparisons for factor: mi	iR within WT			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC	0.194	0.648	0.522	No
Comparisons for factor: mi	iR within S-A			
Comparison	Diff of Means	t	P	P<0.050
miR-Sec22b vs. miR-NC				