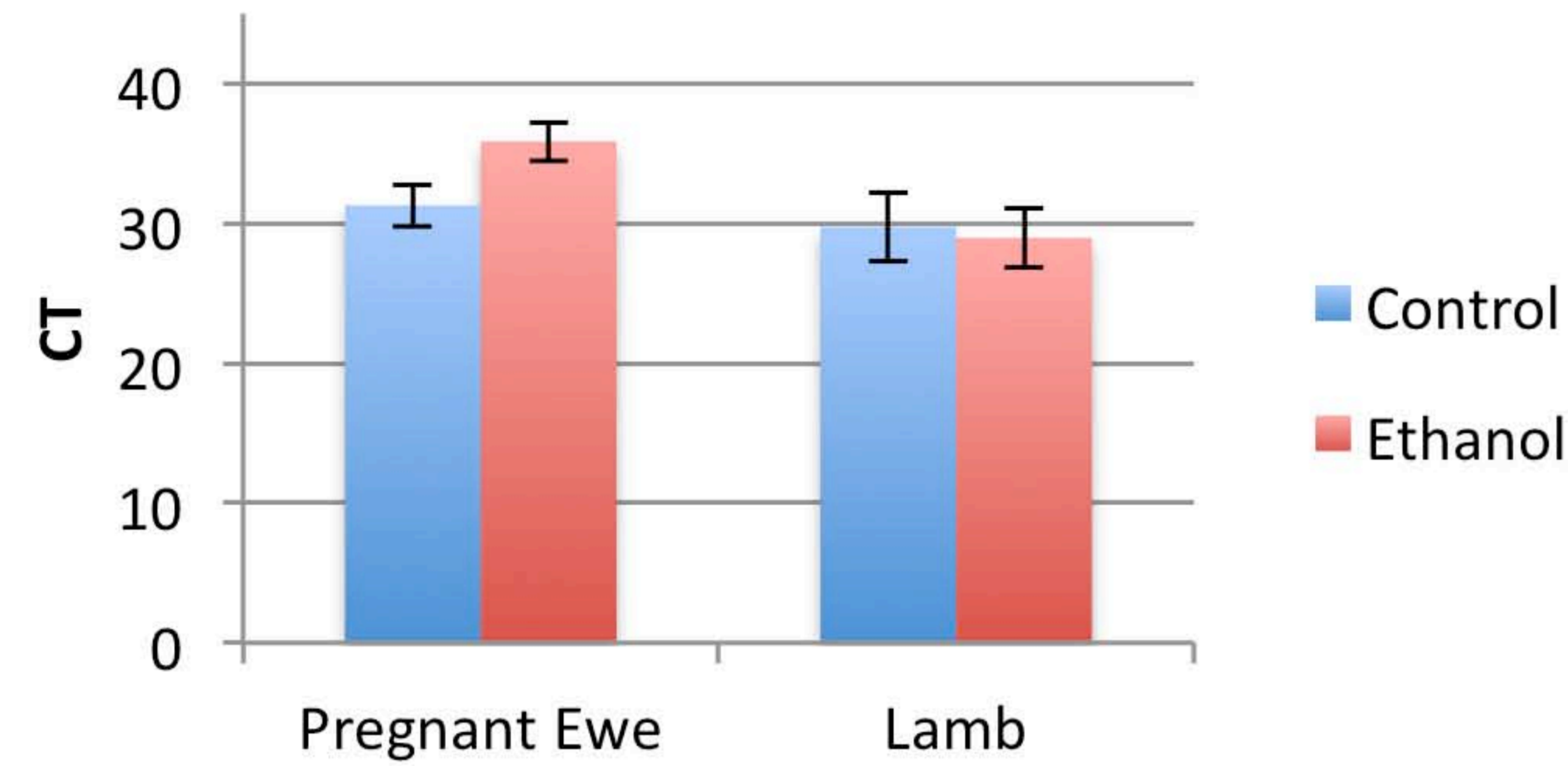


Supplementary Figure 1: Mean Cycle Threshold ($Ct_{\text{average_for_sample}}$) of miRNAs from plasma and cell samples

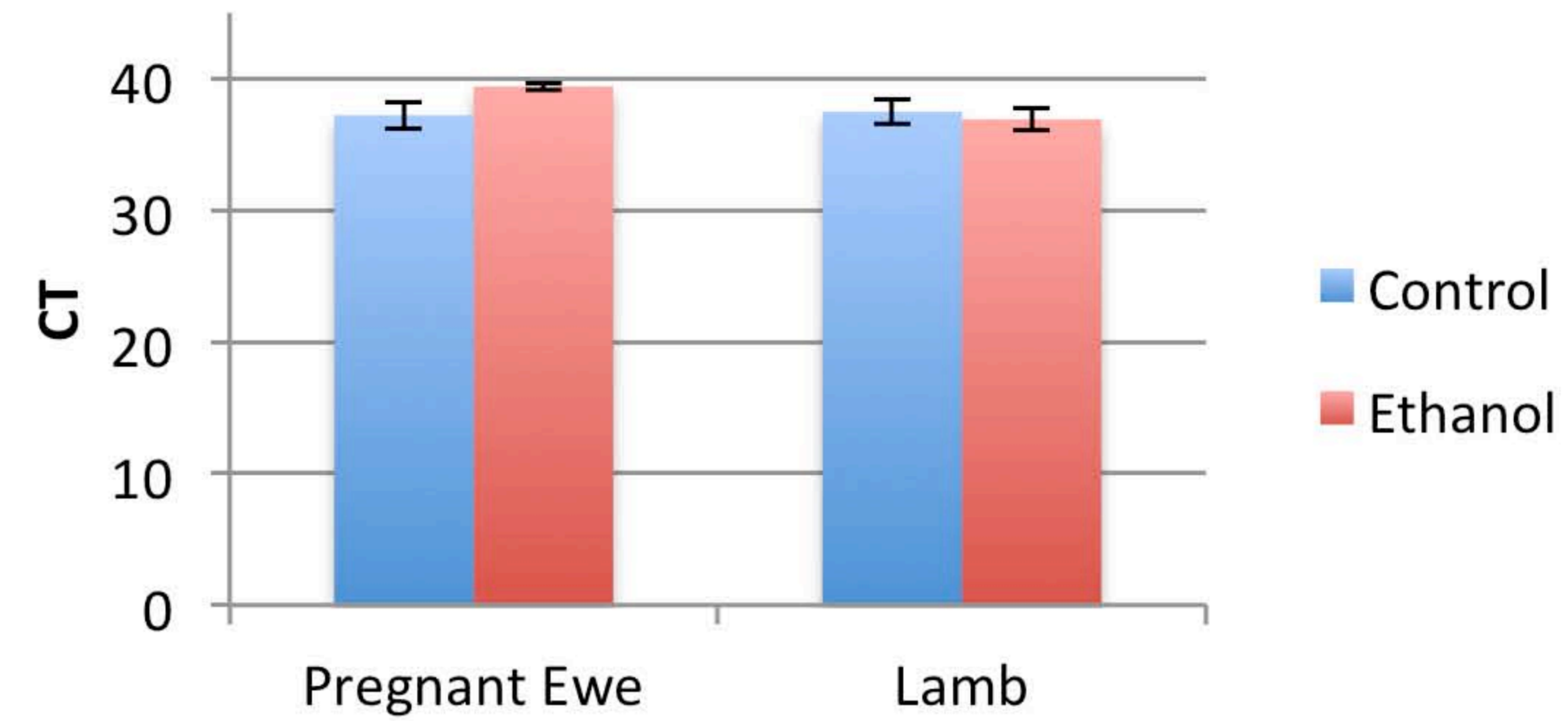
a

Average CT (Panel 1)



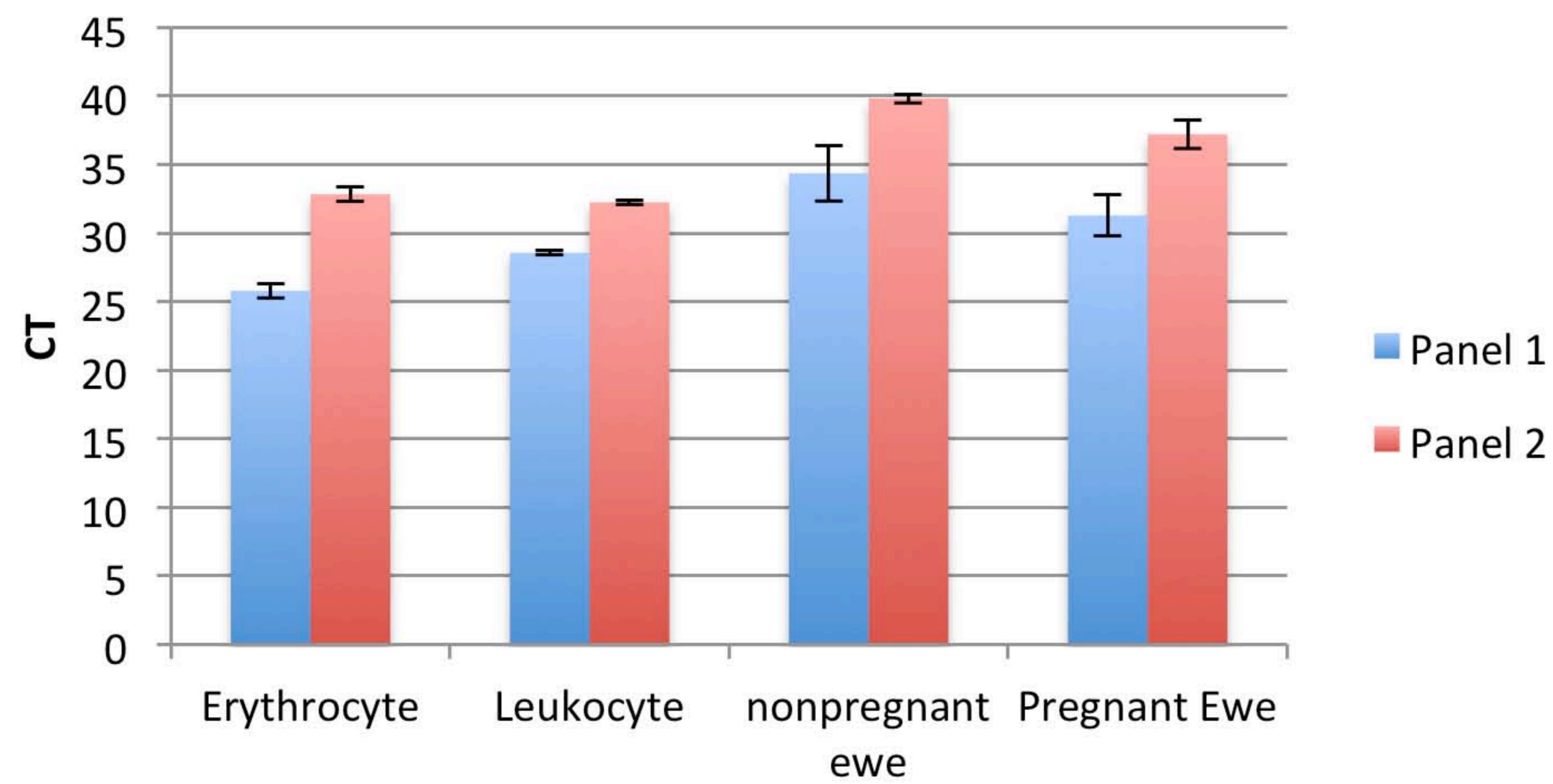
b

Average CT (Panel 2)

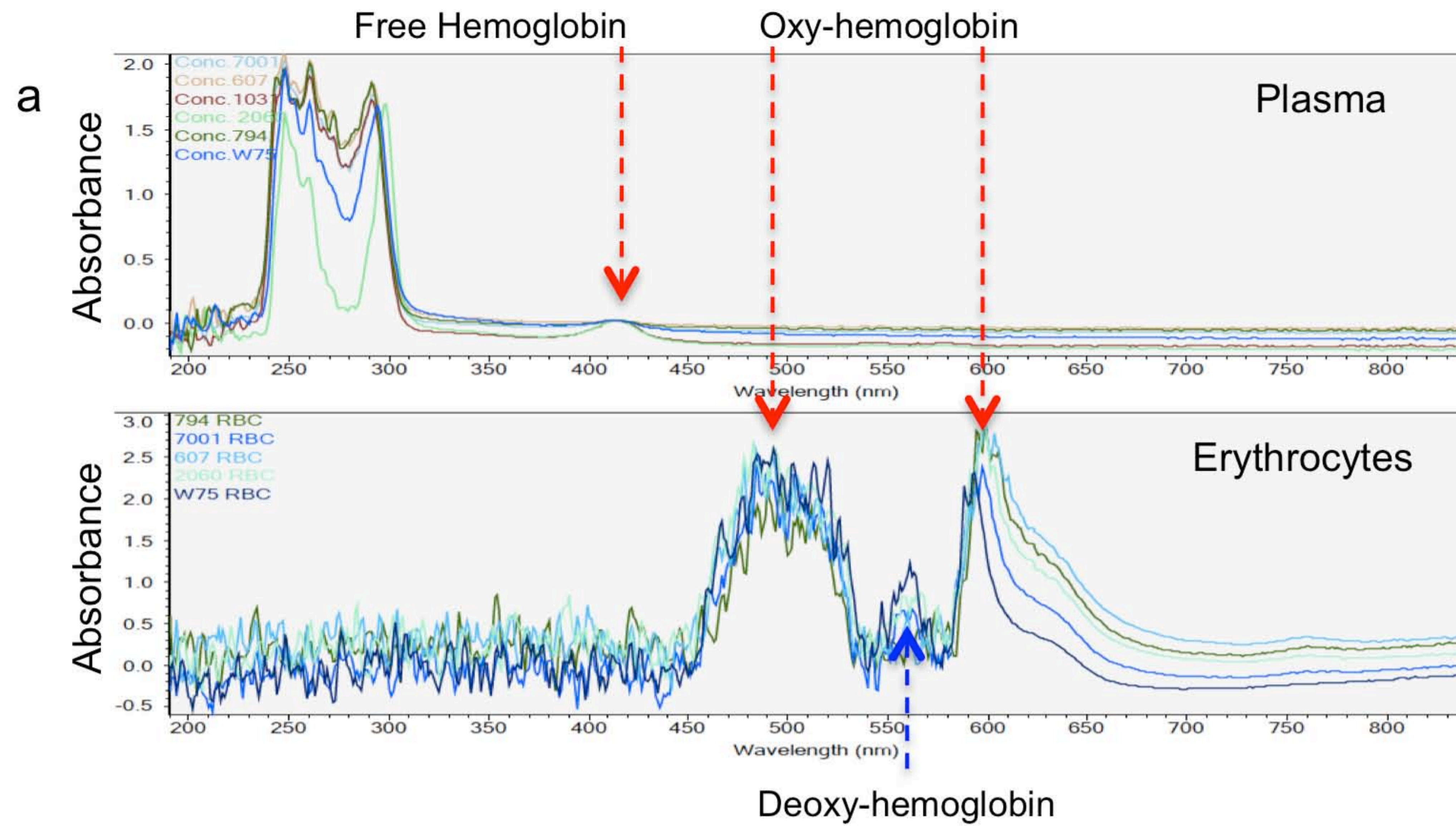


Average CT: Cells vs. Plasma

c



Supplementary Figure 2: Specificity and reliability data for plasma miRNAs

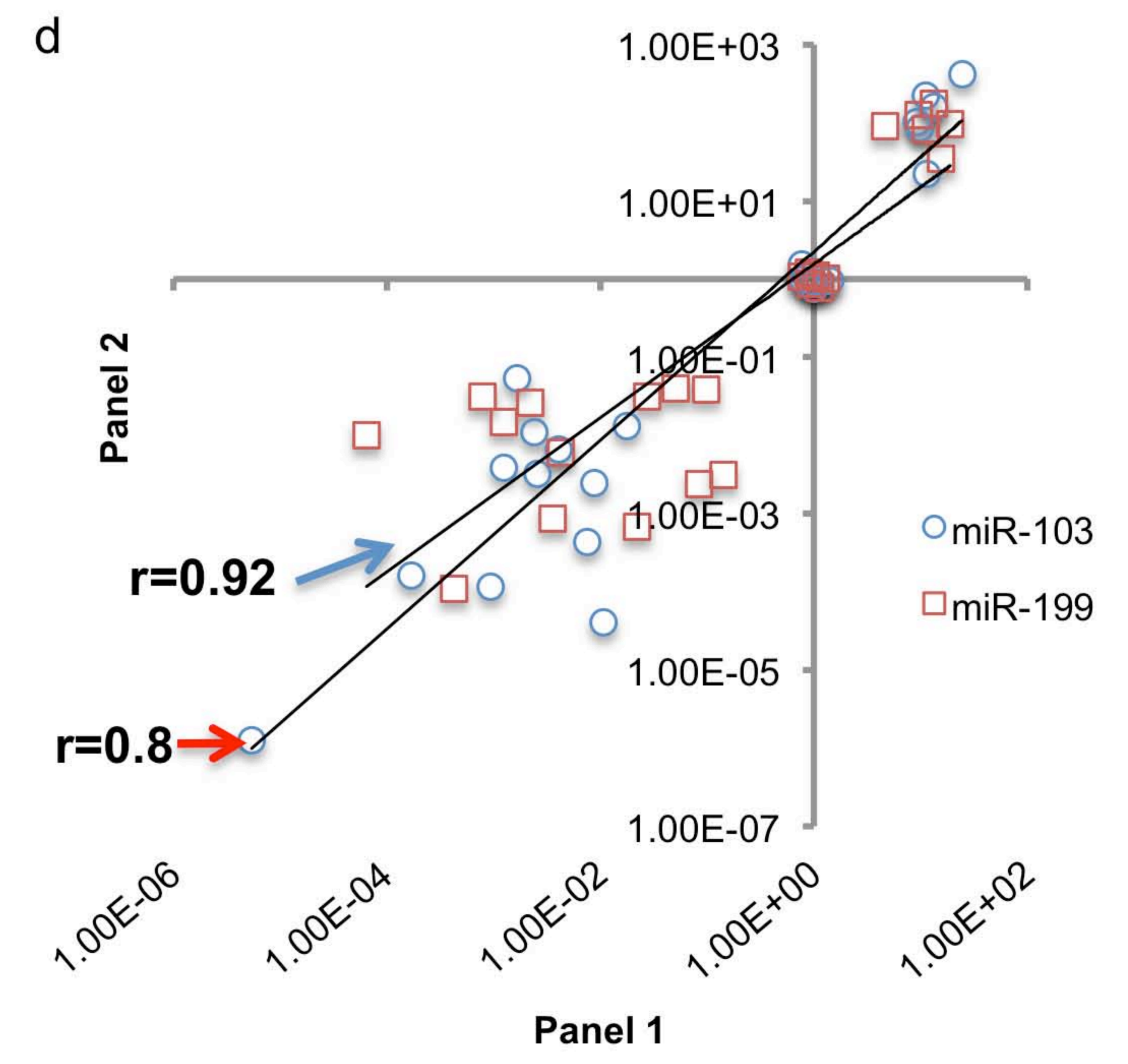
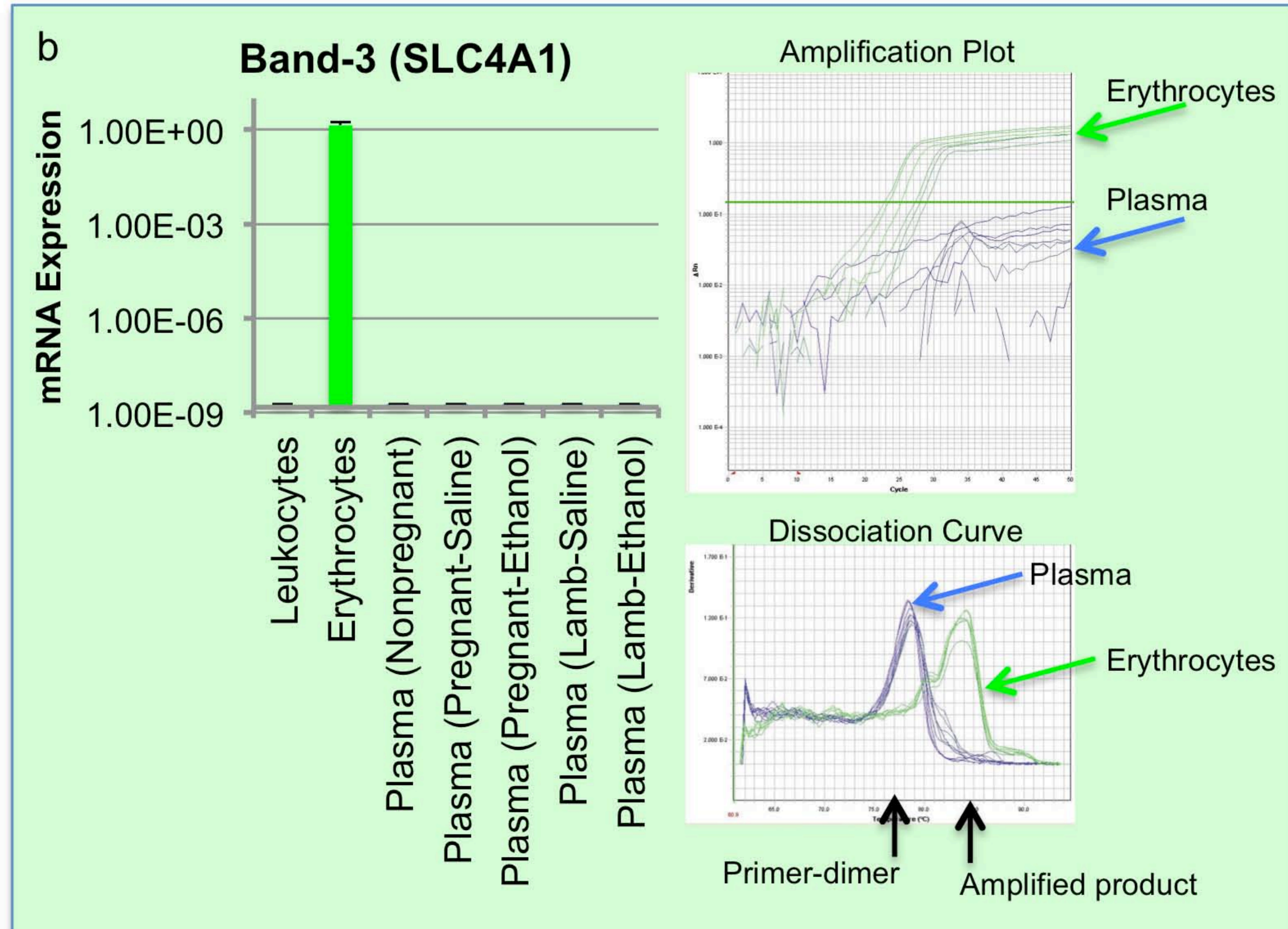


c

Expression of erythrocyte and leukocyte-enriched miRNAs in plasma*

miRNA	Enriched compartment	Fold-enrichment relative to plasma
miR-16	erythrocyte	6598.95
miR-451	erythrocyte	401.66
miR-486-5p	erythrocyte	201.82
miR-92a	erythrocyte	514.17
miR-150	lymphoid	471.17
let-7a	myeloid	43.59
miR-197	myeloid	20.31
miR-223	myeloid	30.12




* Comparison between cell and plasma compartments were based on data from non-pregnant ewes.



Supplementary Figure 3: Tables showing fold-change in miRNA content for PCA component 1 and 2 miRNAs represented graphically in Figures 3 and 6




a

Fold-Change ($2^{-\Delta\Delta CT}$) relative to Leukocytes					
Cells		Plasma			Gene Title
Leukocytes	Erythrocytes	Non-pregnant	Pregnant (Saline Exposed)	Lamb (Saline Exposed)	
1	8.87E+01	9.02E-04	1.82E-03	4.08E-03	hsa-miR-554
1	2.21E+00	1.34E-04	4.10E-03	5.20E-03	hsa-miR-30b
1	6.86E+00	4.04E-04	2.06E-03	3.29E-04	hsa-miR-425
1	1.83E-01	3.46E+06	1.34E+04	3.80E+04	hsa-miR-520c-3p
1	1.38E-01	9.19E+02	6.69E+02	6.92E+04	hsa-miR-556-3p
1	5.86E-04	8.64E+02	1.55E+03	2.31E+02	hsa-miR-624*
1	2.79E-03	1.59E+03	3.19E+05	1.32E+03	hsa-miR-488

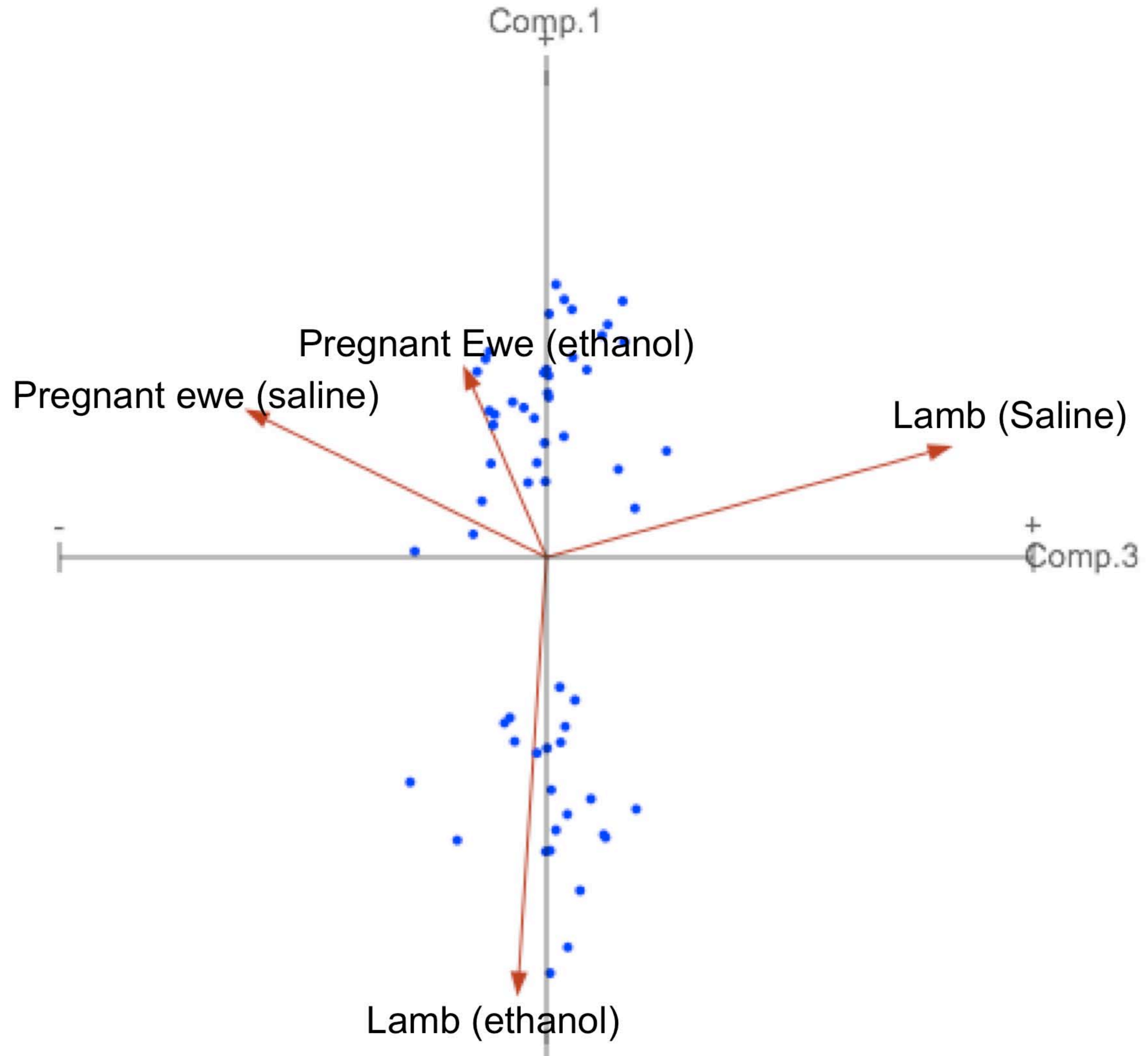
 Decreased relative to Leukocytes
 Similar to Leukocytes
 Increased relative to Leukocytes

b

Fold-Change ($2^{-\Delta\Delta CT}$) relative to Control Pregnant Ewe				
Pregnant Ewe		Neonatal Lamb		Gene Title
Control	Ethanol	Control	Ethanol	
1	4.70E+00	4.42E-01	9.31E-05	hsa-miR-572
1	1.65E+01	9.75E-01	9.05E-05	hsa-miR-720
1	5.26E+00	6.83E-02	3.31E-03	hsa-miR-570
1	1.72E+01	6.12E+00	2.37E-01	hsa-miR-19b
1	1.55E+01	1.37E+00	1.93E-02	hsa-miR-20a
1	5.24E+01	1.66E+02	1.35E-01	hsa-miR-9
1	5.51E+00	2.68E+00	1.28E+03	hsa-let-7d*
1	3.45E+01	8.43E+00	2.94E-01	hsa-miR-15b
1	8.70E-01	7.42E-01	8.41E-04	hsa-let-7a
1	1.18E+02	5.66E+00	1.03E+04	hsa-miR-200a
1	1.31E-04	8.64E-02	1.31E-05	hsa-miR-622
1	1.53E+00	2.01E+00	1.82E+04	hsa-miR-34b
1	1.98E-05	3.19E-03	2.70E-01	hsa-miR-29b-2*

 Decreased Relative to Control Pregnant Ewe
 Similar to Control Pregnant Ewe
 Increased Relative to Control Pregnant Ewe

Supplementary Figure 4: PCA analysis of Panel 1 miRNAs. Principal component 3 separates control pregnant sheep from control newborn lamb plasma miRNAs indicating that the plasma miRNA profiles in the two tissues are similar.



Supplementary Figure 5: Sex-dependent variability in plasma miRNA expression profiles in the neonate

