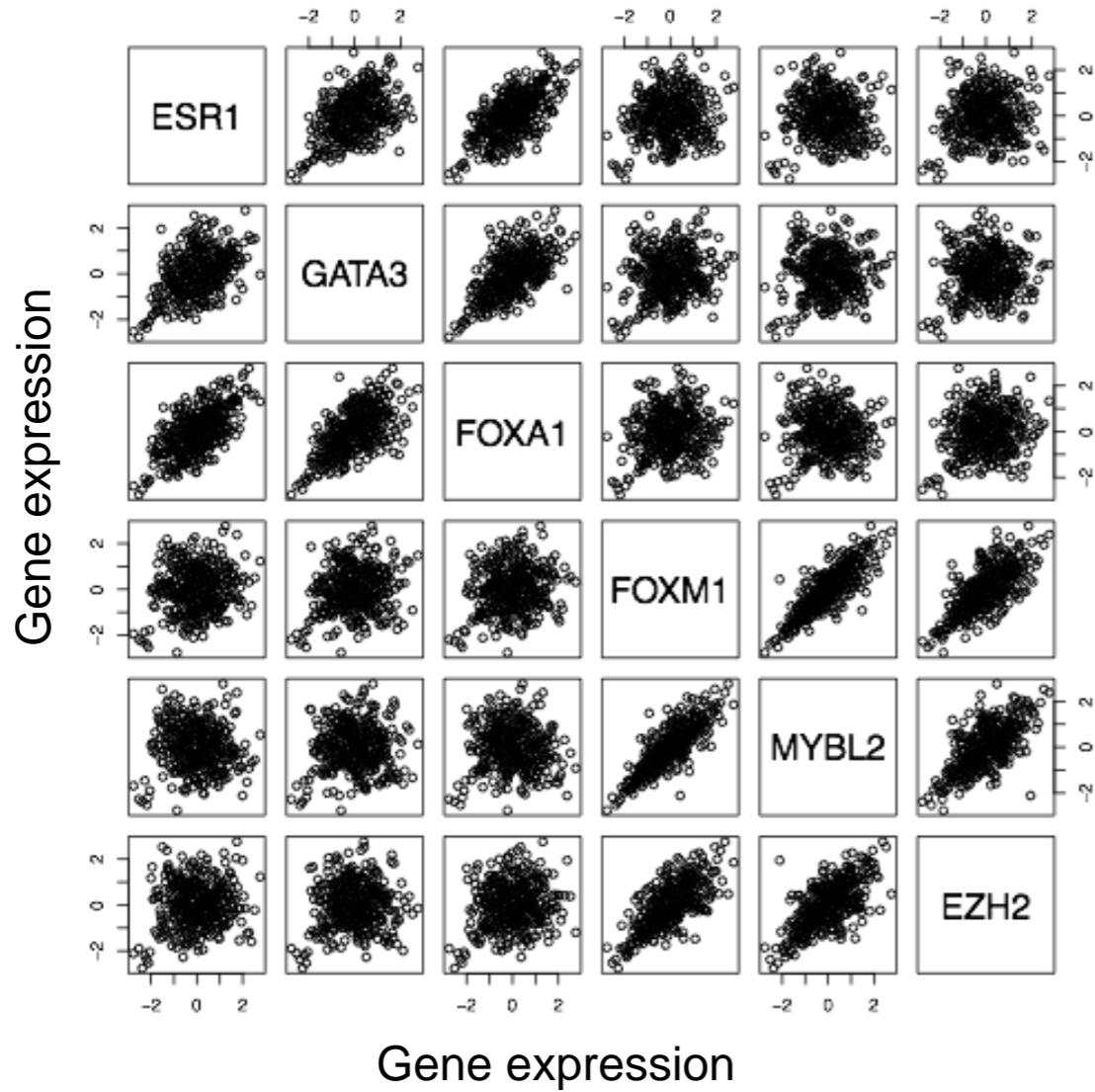


**Figure S7. Correlation analyses between representative master regulator genes by subtype.** We used Pearson correlation to explore the relationships among the representative six MRs. It appears that there exist moderate positive correlations for the intra-group MRs. Regarding the inter-group MRs, however, there are weak or no correlations between them. In luminal B and basal-like subtypes, the correlations of the inter-group MRs are negative.

# A

Luminal A



Correlation coefficients

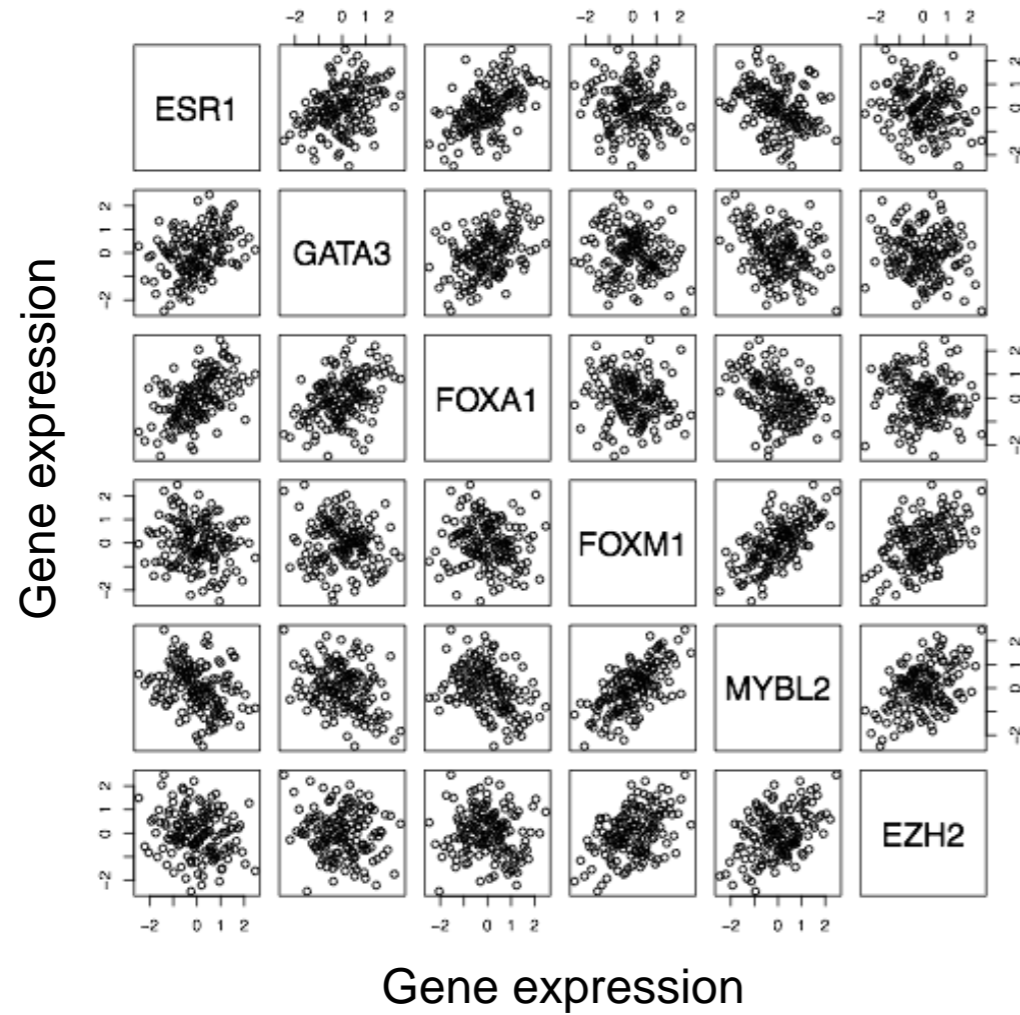
	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	1					
GATA3	0.45	1				
FOXA1	0.64	0.61	1			
FOXM1	0.14	0.18	0.17	1		
MYBL2	-0.04	0.04	-0.04	0.83	1	
EZH2	0.12	0.09	0.17	0.70	0.66	1

p-values

	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	0					
GATA3	0	0				
FOXA1	0	0	0			
FOXM1	0.01	0.00	0.00	0		
MYBL2	0.46	0.50	0.51	0	0	
EZH2	0.03	0.11	0.00	0	0	0

# B

Luminal B



## Correlation coefficients

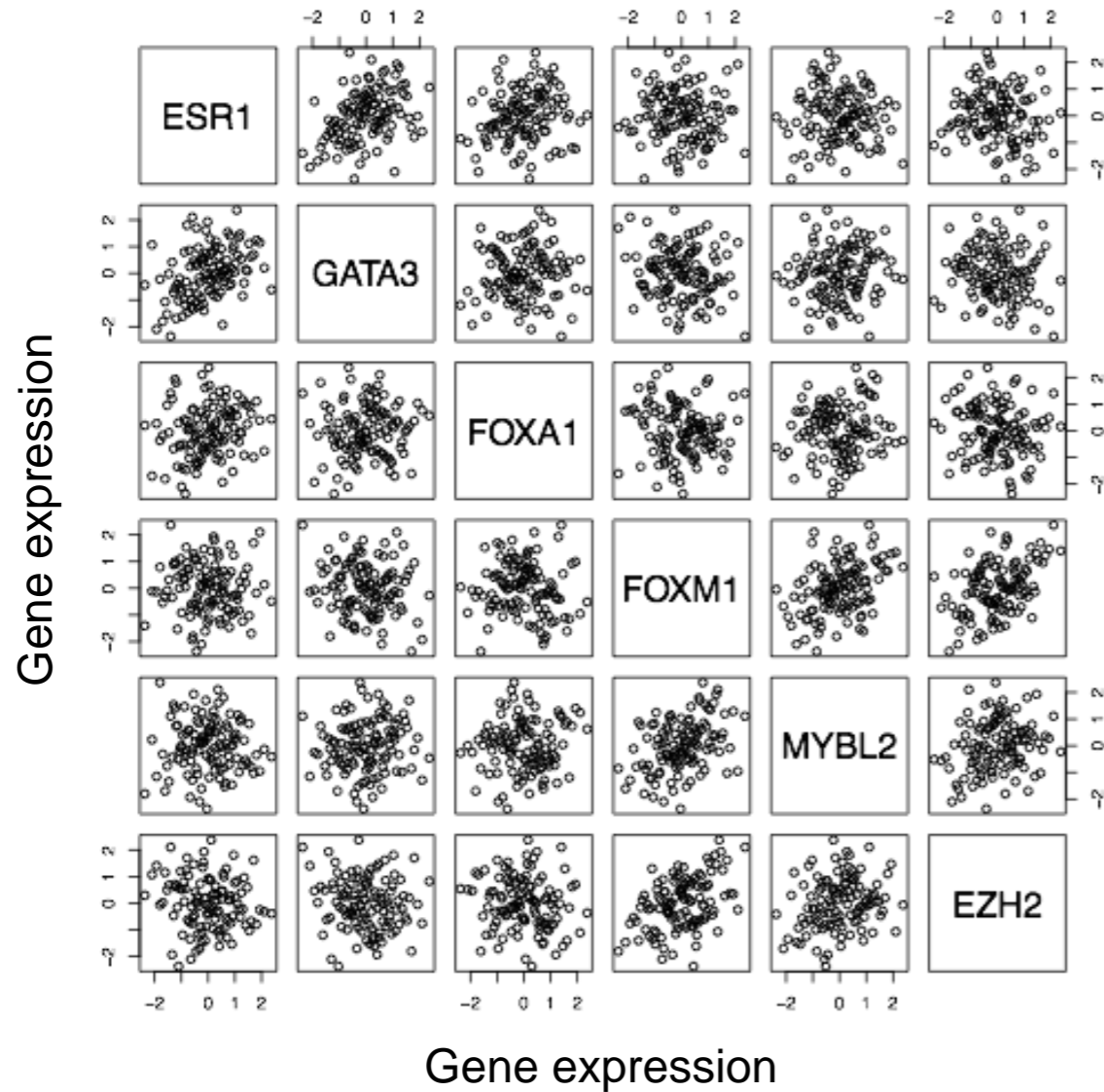
	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	1					
GATA3	0.35	1				
FOXA1	0.52	0.41	1			
FOXM1	-0.13	-0.11	-0.11	1		
MYBL2	-0.28	-0.32	-0.36	0.66	1	
EZH2	-0.17	-0.12	-0.08	0.45	0.42	1

## p-values

	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	0					
GATA3	1.24e-05	0				
FOXA1	2.54e-11	2.65e-07	0			
FOXM1	0.13	0.17	0.18	0		
MYBL2	0.00	7.53e-05	6.31e-06	0	0	
EZH2	0.04	0.13	0.35	1.24e-08	9.33e-08	0

# C

Basal-like



## Correlation coefficients

	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	1					
GATA3	0.39	1				
FOXA1	0.17	0.06	1			
FOXM1	-0.03	-0.15	-0.08	1		
MYBL2	-0.02	0.08	0.07	0.39	1	
EZH2	-0.11	-0.12	-0.12	0.43	0.22	1

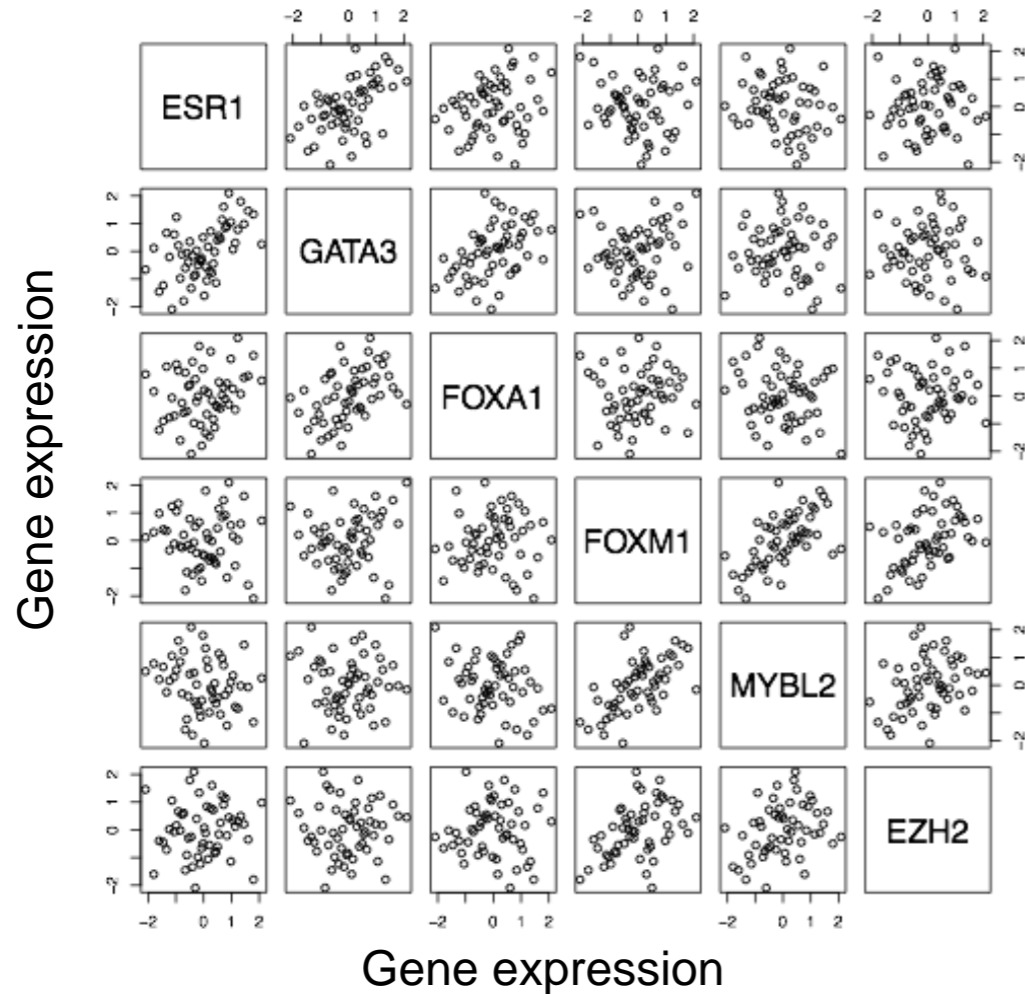
## p-values

	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	0					
GATA3	1.97e-05	0				
FOXA1	0.06	0.55	0			
FOXM1	0.75	0.11	0.41	0		
MYBL2	0.81	0.40	0.44	2.31e-05	0	
EZH2	0.25	0.20	0.20	2.06e-06	0.02	0

# D

HER2 enriched

Correlation coefficients



	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	1					
GATA3	0.54	1				
FOXA1	0.22	0.46	1			
FOXM1	-0.07	0.14	0.06	1		
MYBL2	-0.19	-0.04	-0.18	0.59	1	
EZH2	0.04	0.00	-0.00	0.44	0.32	1

p-values

	ESR1	GATA3	FOXA1	FOXM1	MYBL2	EZH2
ESR1	0					
GATA3	2.52e-05	0				
FOXA1	0.11	0.00	0			
FOXM1	0.64	0.32	0.69	0		
MYBL2	0.17	0.77	0.18	2.18e-06	0	
EZH2	0.75	0.99	0.99	0.00	0.02	0