

Summary of LR interactions for the TNBC data analysis.

Cell Type (L-R)	Cell # (L-R)	Gene # (L-R)	Top five Interaction pairs
Myeloid -- Epithelial Basal	109-57	335-322	TIMP1 -- CD63; CD14 -- ITGB1; HLA-B -- CANX; HLA-A -- APLP2; UBA52 -- ERBB2
	805-925	509-530	TIMP1 -- CD63; HLA-B -- CANX; LGALS1 -- ITGB1; CD14 -- ITGB1; PKM -- CD44
Epithelial Basal	250-1155	376-508	LGALS1 -- ITGB1; HLA-B -- CANX; CD14 -- ITGB1; PKM -- CD44; VIM -- CD44
	2992-72	544-352	CD14 -- ITGB1; F13A1 -- ITGB1; RPS27A -- TGFB2; LGALS1 -- ITGB1; C1QB -- LRP1
	450-1886	433-570	HLA-A -- APLP2; SPP1 -- CD44; SPP1 -- ITGB1; B2M -- HLA-F; TIMP1 -- CD63
Epithelial Basal -- Myeloid	57-109	367-362	TIMP1 -- CD63; LGALS1 -- PTPRC; PKM -- CD44; APP -- CD74; LGALS1 -- CD69
Myeloid	925-805	525-507	APP -- CD74; VIM -- CD44; MDK -- ITGB1; HLA-B -- CANX; CALR -- HLA-F
	1155-250	528-413	HLA-B -- CANX; APP -- CD74; HLA-A -- APLP2; PKM -- CD44; LGALS1 -- PTPRC
	72-2992	382-555	ADAM9 -- ITGB1; LAMC1 -- ITGB1; TFPI -- LRP1; HSP90B1 -- LRP1; COL1A1 -- CD93
	1885-450	568-455	TIMP1 -- CD63; APP -- CD74; VIM -- CD44; PKM -- CD44; RPS19 -- C5AR1
Epithelial Basal -- Endothelial	57-136	367-329	TIMP1 -- CD63; UBB -- LDLR; UBA52 -- TGFB2; UBC -- TGFB2; HLA-C -- NOTCH4
Endothelial	925-164	525-415	APP -- CAV1; MDK -- ITGB1; APOE -- SCARB1; MDK -- ITGA6; APP -- CD74
	1155-27	528-251	ARF1 -- INSR; HLA-A -- APLP2; HLA-B -- CANX; MDK -- ITGB1; LGALS1 -- ITGB1
	72-178	382-444	COL1A1 -- ITGB1; TGFB1 -- ENG; ADAM9 -- ITGB1; TGFB1 -- CAV1; HGF -- ITGB1
Endothelial -- Epithelial Basal	1886-105	568-356	TIMP1 -- CD63; UBB -- TGFB2; VEGFA -- ITGB1; UBA52 -- TGFB2; GNAI2 -- CAV1
	136-57	352-322	HLA-B -- CANX; TIMP1 -- CD63; LGALS1 -- ITGB1; CALM1 -- INSR; HSPG2 -- ITGB1
	164-925	401-530	TIMP1 -- CD63; HBEGF -- CD9; ADAM15 -- ITGB1; COL4A1 -- ITGB1; HSPG2 -- ITGB1
	27-1155	270-508	HLA-A -- APLP2; HLA-B -- CANX; HSPG2 -- SDC1; CALM1 -- PTPRA; CALM1 -- EGFR
Epithelial Basal -- Myoepithelial	178-72	420-352	HSPG2 -- ITGB1; HSPG2 -- ITGA2; HSPG2 -- LRP1; HSP90AA1 -- EGFR; LAMC1 -- ITGA2
	105-1886	365-570	GNAI2 -- CAV1; HLA-A -- APLP2; CALM1 -- KCNN4; COL4A1 -- ITGB1; HLA-B -- CANX
	57-10	367-147	TIMP1 -- CD63; CALM3 -- MYLK; CALM2 -- MYLK; APP -- CAV1; COL1A1 -- ITGB1
	925-167	525-419	APP -- CD74; MDK -- ITGB1; MDK -- SDC4; APP -- CAV1; CALM2 -- MYLK
Myoepithelial	1155-7	528-171	UBC -- LDLR; TIMP1 -- CD63; MDK -- ITGA6; PKM -- CD44; FN1 -- ITGAV
	72-9	382-253	ADAM9 -- ITGAV; COL1A1 -- CD44; HGF -- SDC2; ICAM1 -- EGFR; TGFB1 -- ITGAV
	1886-19	568-206	ACTR2 -- LDLR; CALM3 -- MYLK; APP -- CD74; TIMP1 -- CD63; APP -- CAV1
	10-57	173-322	VIM -- CD44; CALM1 -- INSR; UBC -- ERBB2; HLA-B -- CANX; LAMB3 -- ITGB1
Myoepithelial -- Epithelial Basal	167-925	456-530	HLA-B -- CANX; TIMP1 -- CD63; LGALS1 -- ITGB1; HLA-A -- APLP2; LGALS3BP -- ITGB1
Epithelial Basal	7-1155	198-508	HLA-B -- CANX; B2M -- TFRC; HMGB1 -- SDC1; HSP90AA1 -- EGFR; CALM2 -- EGFR
	9-72	284-352	COL6A2 -- ITGB1; COL1A1 -- CD44; CALM1 -- MYLK; LAMC1 -- ITGA3; COL1A1 -- ITGB1
	19-1886	245-570	RPS27A -- LDLR; HLA-A -- APLP2; B2M -- HLA-F; APP -- CAV1; HLA-B -- CANX
	57-121	367-311	HLA-A -- APLP2; TIMP1 -- CD63; RPS27A -- ERBB2; RPS27A -- LRP2; RPS27A -- LDLR
Epithelial basal -- Epithelial Luminal	925-127	525-382	MDK -- SDC4; APOE -- LDLR; MDK -- ITGB1; APP -- CD74; VIM -- CD44
Epithelial Luminal	1155-5	528-145	LAMA3 -- SDC2; ADAM15 -- ITGB1; FN1 -- ITGAV; UBC -- ERBB2; PSEN1 -- NOTCH3
	1886-24	568-245	ACTR2 -- LDLR; APP -- CD74; HSPA8 -- LDLR; MDK -- ITGB1; B2M -- HLA-F
	121-57	358-322	MDK -- SDC4; TIMP1 -- CD63; CDH1 -- PTPRF; COL4A5 -- ITGB1; HLA-A -- APLP2
Epithelial Luminal -- Epithelial basal	127-925	419-530	HLA-B -- CANX; TIMP1 -- CD63; MDK -- ITGB1; APP -- CD74; PKM -- CD44
Epithelial basal	5-1155	157-508	MDK -- ITGB1; PKM -- CD44; MDK -- SDC1; UBA52 -- EGFR; UBB -- ERBB2
	24-1886	280-570	HLA-A -- APLP2; TIMP1 -- CD63; MDK -- ITGB1; HLA-B -- CANX; MDK -- ITGA6
	109-582	335-440	HLA-A -- APLP2; LGALS1 -- ITGB1; C1QB -- LRP1; HLA-B -- CANX; PSAP -- LRP1
Myeloid -- iCAFs	805-333	509-455	PSAP -- LRP1; LRPAP1 -- LRP1; TIMP1 -- CD63; CALR -- LRP1; C1QB -- LRP1
iCAFs	250-122	376-323	CD14 -- ITGB1; LGALS1 -- ITGB1; LGALS3BP -- ITGB1; C1QB -- LRP1; PSAP -- LRP1
	2992-28	544-264	LGALS1 -- ITGB1; C1QB -- LRP1; PKM -- CD44; PLTP -- ABCA1; TIMP1 -- CD63
	450-64	433-366	TIMP1 -- CD63; SPP1 -- CD44; HLA-A -- APLP2; MMP9 -- CD44; VCAN -- ITGB1
	582-109	452-362	COL1A1 -- CD44; COL1A2 -- CD44; FN1 -- PLAUR; LGALS1 -- PTPRC; TIMP1 -- CD63
Myeloid -- iCAFs	333-805	473-507	TIMP1 -- CD63; COL1A1 -- CD44; LGALS1 -- PTPRC; B2M -- HLA-F; COL1A2 -- CD44
Myeloid	122-250	365-413	COL1A1 -- CD44; VIM -- CD44; TIMP1 -- CD63; PKM -- CD44; COL1A2 -- CD44
	28-2992	307-555	B2M -- LILRB2; HLA-B -- LILRB1; HLA-B -- CANX; B2M -- TFRC; B2M -- LILRB1
	64-450	397-455	FN1 -- PLAUR; FN1 -- CD44; VIM -- CD44; TIMP1 -- CD63; VCAN -- CD44
	109-71	335-295	C1QB -- LRP1; PSAP -- LRP1; CD14 -- ITGB1; CALR -- LRP1; SERPING1 -- LRP1
Myeloid -- myCAFs	805-71	509-352	PSAP -- LRP1; TIMP2 -- ITGB1; HLA-B -- CANX; ITGB2 -- THY1; TGFB1 -- ITGB1
myCAFs	250-93	376-325	ITGB2 -- THY1; LGALS1 -- ITGB1; FN1 -- ITGB1; HLA-B -- CANX; SERPINA1 -- LRP1
	2992-10	544-239	CD14 -- ITGB1; APOE -- LRP1; F13A1 -- ITGB1; MDK -- ITGB1; COL6A2 -- ITGB1
	450-35	433-296	CD14 -- ITGB1; TIMP1 -- CD63; HLA-A -- APLP2; VCAN -- ITGB1; HLA-B -- CANX
	71-109	328-362	TIMP1 -- CD63; COL1A1 -- CD44; CXCL12 -- CXCR4; LGALS1 -- PTPRC; COL1A2 -- CD44
Myeloid -- Myeloid	71-805	405-507	HLA-B -- CANX; COL1A1 -- CD44; CTGF -- ITGB2; COL1A2 -- CD44; FN1 -- PLAUR
Myeloid	93-250	350-413	FN1 -- CD44; TIMP1 -- CD63; FN1 -- PLAUR; PKM -- CD44; B2M -- LILRB2
	10-2992	278-555	LGALS1 -- PTPRC; LGALS1 -- ITGB1; COL1A2 -- CD44; COL1A2 -- CD93; VIM -- CD44
	35-450	336-455	COL1A2 -- CD44; LGALS1 -- PTPRC; HLA-A -- APLP2; APP -- CD74; FN1 -- C5AR1
Myeloid -- CD4+ T-cells	109-225	335-263	HLA-B -- CD3D; HLA-C -- CD3D; B2M -- CD3D; LGALS1 -- CD69; VIM -- CD44
CD4+ T-cells	805-1104	509-436	HLA-A -- CD3D; B2M -- CD3D; HLA-B -- CD3D; HLA-C -- CD3D; LGALS1 -- PTPRC
	250-224	376-264	HLA-C -- CD3D; HLA-B -- CD3G; HLA-B -- CD3D; LGALS1 -- ITGB1; CD14 -- ITGB1
	2992-351	544-300	LGALS1 -- CD69; LGALS1 -- PTPRC; B2M -- CD3D; HLA-B -- CD3D; MRC1 -- PTPRC
	450-99	433-229	HLA-A -- CD3D; B2M -- CD3D; HLA-B -- CD3D; LGALS1 -- PTPRC; HLA-C -- CD3D
CD4+ T-cells -- Myeloid	225-109	244-362	HLA-A -- APLP2; VIM -- CD44; HLA-B -- CANX; LGALS1 -- PTPRC; B2M -- HLA-F
Myeloid	1104-805	407-507	VIM -- CD44; HLA-B -- CANX; HLA-A -- APLP2; B2M -- HLA-F
	224-250	269-413	VIM -- CD44; PKM -- CD44; HLA-A -- APLP2; B2M -- HLA-F; HLA-B -- CANX
	351-2992	282-555	HLA-B -- CANX; HLA-B -- LILRB2; HLA-B -- LILRB1; B2M -- LILRB2; HLA-A -- APLP2
	99-450	235-455	HLA-A -- APLP2; RPS19 -- C5AR1; B2M -- HLA-F; B2M -- TFRC; HLA-B -- CANX
Myeloid -- T-Regs	109-41	335-147	HLA-A -- CD3D; VIM -- CD44; HLA-B -- CD3D; HLA-C -- CD3D; HLA-A -- CD3G
T-Regs	805-652	509-386	HLA-B -- CD3D; B2M -- CD3D; HLA-C -- CD3D; B2M -- CD3G; VIM -- CD44
	250-118	376-234	HLA-B -- CD3D; HLA-A -- CD3D; HLA-C -- CD3D; LGALS1 -- PTPRC; CD59 -- CD2
	2992-154	544-264	B2M -- CD3D; LGALS1 -- PTPRC; VIM -- CD44; HLA-A -- CD3D; HLA-B -- CD3D
	450-29	433-157	HLA-A -- CD3D; B2M -- CD3D; HLA-B -- CD3D; LGALS1 -- PTPRC; B2M -- HLA-F
T-Regs -- Myeloid	41-109	152-362	HLA-B -- CANX; B2M -- HLA-F; HLA-A -- APLP2; B2M -- LILRB2; HLA-A -- LILRB2
Myeloid	652-805	377-507	HLA-B -- CANX; VIM -- CD44; PKM -- CD44; HLA-A -- APLP2; B2M -- HLA-F
	118-250	232-413	HLA-A -- APLP2; VIM -- CD44; PKM -- CD44; HLA-B -- CANX; B2M -- HLA-F
	154-2992	252-555	HLA-B -- CANX; HLA-A -- APLP2; HLA-B -- LILRB2; HLA-B -- LILRB1; HLA-C -- LILRB2
	29-450	155-455	HLA-A -- APLP2; HLA-B -- CANX; HLA-B -- LILRB2; HLA-C -- LILRB2; B2M -- TFRC