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Article

Carcinoma-Associated Mesenchymal Stem Cells Promote Chemoresistance in Ovarian Cancer Stem Cells via PDGF Signaling

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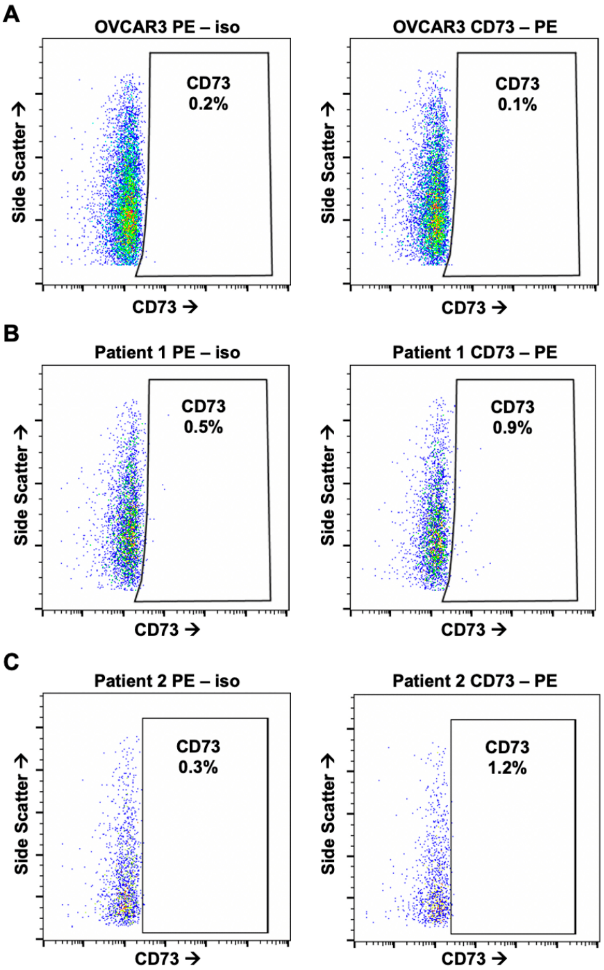
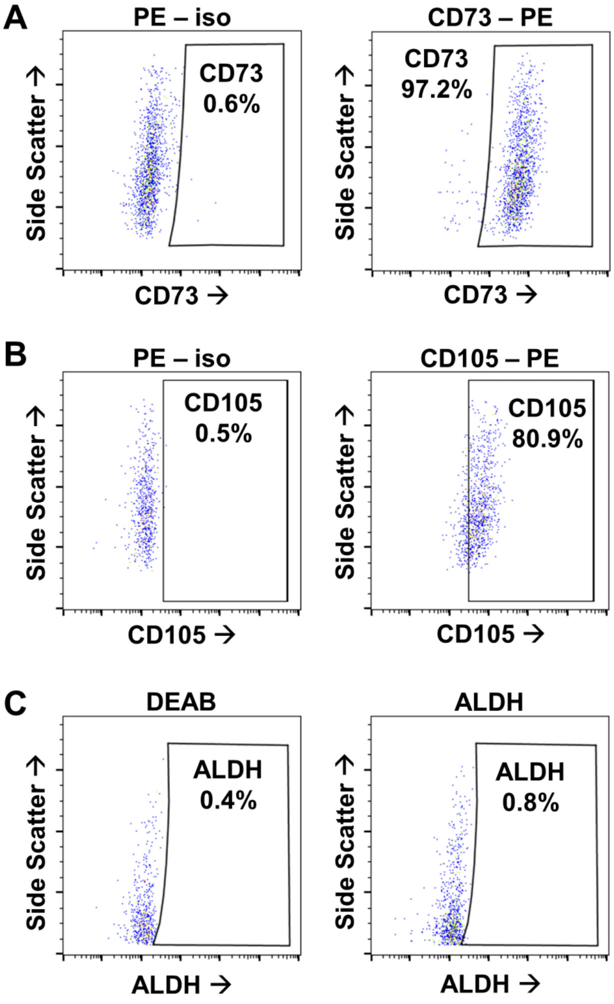
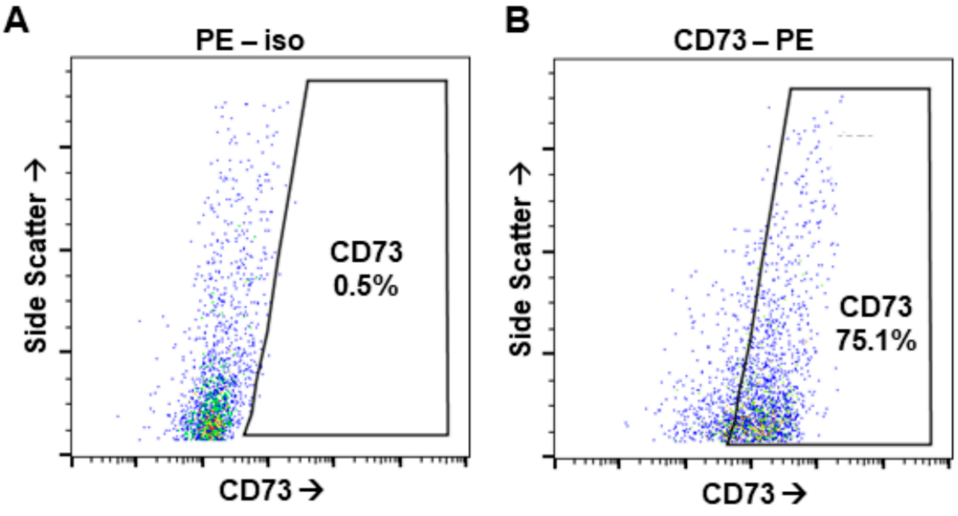
Supplementary Materials



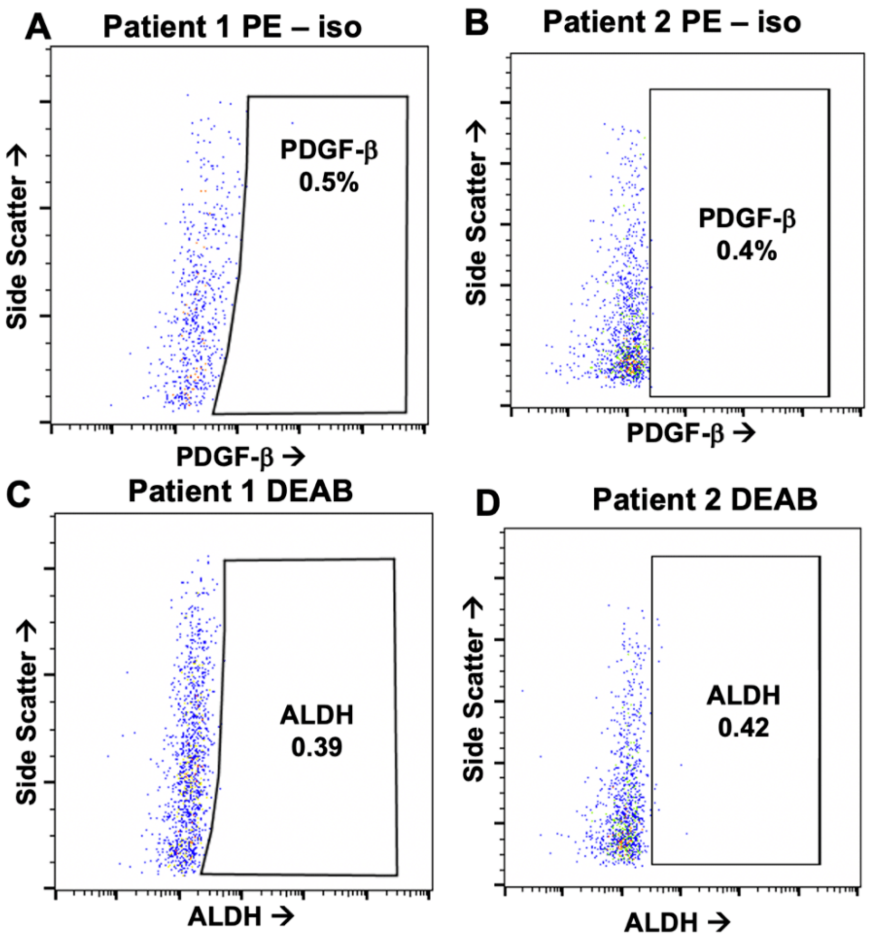
Supplementary Figure S1. FACS gating strategy for CD73 expression in OVCAR3 and patient-derived CSC. (Left) FMO isotype for CD73 expression in (**A**) OVCAR3 CSC, (**B**) Patient 1 CSC, and (**C**) Patient 2 CSC. (Right) FACS of CD73 expression in (**A**) OVCAR3 CSC, (**B**) Patient 1 CSC, and (**C**) Patient 2 CSC showing that any CD73 signal from CSC/MSC heterospheroids is from CD73 expressing MSC.



Supplementary Figure S2. FACS gating strategy for MSC expression of CD73, CD105 and ALDH. (**A**) Gating strategy for CD73 using a PE isotype. (**B**) Gating strategy for CD105 with a PE isotype. (**C**) Gating strategy for ALDH using DEAB.



Supplementary Figure S3. FACS gating strategy for siPDGFB-MSC CD73 expression. (**A**) Gating strategy for CD73 using a PE isotype. (**B**) FACS of CD73 expression showing that MSC maintain a mesenchymal phenotype even with PDGFB silencing.



Supplementary Figure S4. FACS gating strategy for PDGF-b and ALDH in patient derived CSC. (**A**) and (**B**) Gating strategy for PDGF-b using a PE isotype. (**C**) and (**D**) Gating strategy for ALDH expression using DEAB.

Table S1. Summary of Carboplatin IC50 Values in OVCAR3/MSC Heterospheroids

Condition	Carboplatin IC_{50} (μM)	Manuscript Figure
OVCAR3 CSC	25.7	2D
OVCAR3 CSC/hAMSC	67.0	2D
OVCAR3 CSC + Sunitinib	27.3	3E
OVCAR3 CSC/hAMSC + Sunitinib	39.4	3E
OVCAR3 CSC/SCR hAMSC	66.3	4D
OVCAR3 CSC/siPDGFB hAMSC	46.2	4D
OVCAR3 CSC/hAMSC + Sonidegib	29.8	6B
OVCAR3 CSC/siPDGFB hAMSC + Sonidegib	18.7	6B

Table S2. Primers used in qPCR.

Role	Primers	Sequence
CSC EMT	TWIST	5′- GTC CGC AGT CTT ACG AGG AG -3′ 5′- GCT TGA GGG TCT GAA TCT TGC T -3′
	SNAIL	5′- TCG GAA GCC TAA CTA CAG CGA -3′ 5′- AGA TGA GCA TTG GCA GCG AG -3′
	ZEB1	5′- GAT GAT GAA TGC GAG TCA GAT GC -3′ 5′- ACA GCA GTG TCT TGT TGT TGT -3′
	ZEB2	5′- GGA GAC GAG TCC AGC TAG TGT -3′ 5′- CCA CTC CAC CCT CCC TTA TTT C -3′
PDGF Signaling	PDGFB	5′- CTC GAT CCG CTC CTT TGA TGA -3′ 5′- CGT TGG TGC GGT CTA TGA G -3′
	PDGFRB	5′- TGA TGC CGA GGA ACT ATT CAT CT -3′ 5′- TTT CTT CTC GTG CAG TGT CAC -3′
Hedgehog Signaling	Patch 1 (PTCH1)	5′- ACT TCA AGG GGT ACG AGT ATG T -3′ 5′- TGC GAC ACT CTG ATG AAC CAC -3′
	Smoothened (SMOO)	5′- TCG AAT CGC TAC CCT GCT G -3′ 5′- CAA GCC TCA TGG TGC CAT CT -3′
	GLI1	5′- AAC GCT ATA CAG ATC CTA GCT CG -3′ 5′- GTG CCG TTT GGT CAC ATG G -3′
	GLI2	5′- CCC CTA CCG ATT GAC ATG CG -3′ 5′- GAA AGC CGG ATC AAG GAG ATG -3′
	Sonic Hedgehog (SHH)	5′- CTC GCT GCT GGT ATG CTC G -3′ 5′- ATC GCT CGG AGT TTC TGG AGA -3′
	Indian Hedgehog (IHH)	5′- AGA CCG CGA CCG CAA TAA G -3′ 5′- GCC TTT GAC TCG TAA TAC ACC CA -3′