

Supplementary Table 1. List of antibodies used in this study.

Primary antibodies	Source	Catalog #	Dilution for IF	Dilution for WB	Dilution for IHC
EGFR (rabbit)	Cell Signaling Technology	2232		1:1000	
EGFR (MINT-5) (mouse)	Tosi et al. 1995		1:50		
P-EGFR(Tyr1068) (mouse)	Cell Signaling Technology	2236S		1:1000	
P-CDK5(Tyr15) (rabbit)	Abcam	TA312175		1:500	
CDK5 (mouse)	Santa Cruz Biotechnology	sc-6247		1:500	
β -actin (rabbit)	Sigma-Aldrich	A 2066		1:400	
E-cadh (rabbit)	Santa Cruz Biotechnology	sc-7870		1:200	1:200
E-cadh (mouse)	Invitrogen	13-1700	1:500		
claudin-4 (mouse)	Invitrogen	329400		1:500	
PLEKHA7 (rabbit)	Sigma-Aldrich	HPA038610	1:200	1:500	1:250
β -catenin	Sigma-Aldrich	C2206	1:300		

Supplementary Table 2. Quantitative evaluation of P-MAPK on E-cadherin silenced cells stimulated with EGF 20 ng/ml. The table reports the ratio between the target protein and β -actin, as the percentage of the control, from three different experiments performed on both OAW42 and OVCAR5 cells of Fig. 2a and from Fig. 2b.

SiRNA:	Cell line/ Patient sample				
	OAW42		OVCAR5		Patient #21
	Average	Standard deviation	Average	Standard deviation	
Co	100,00	1,42E-14	100,00	1,00E-14	100,00
E-cadh-1	67,35	4,07E+00	79,20	3,18E+01	
E-cadh-2	67,68	1,75E+01	46,20	2,35E+01	
E-cadh-1/2	70,70	2,78E+01	52,30	2,29E+01	54,59

Supplementary Table 3. Selected EOC samples from the publicly available datasets analyzed in the present study.

DATASETS	Reference	OSE n=47	EOC		
			LMP n=38	LG n=57	HG n=191
GSE18520	Mok SC, Bonome T, Vathipadiekal V, Bell A et al. <i>Cancer Cell</i> 2009 Dec 8;16(6):521-32	10	-	-	53
GSE27651	King ER, Tung CS, Tsang YT, Zu Z et al. <i>Am J Surg Pathol</i> 2011 Jun;35(6):904-12.	6	8	13	22
GSE14001	Tung CS, Mok SC, Tsang YT, Zu Z et al. <i>Mod Pathol</i> 2009 Sep;22(9):1243-50.	3	-	10	10
GSE12172	Anglesio MS, Arnold JM, George J, Tinker AV et al. <i>Mol Cancer Res</i> 2008 Nov;6(11):1678-90.	-	30	13	45
GSE14407	Bowen NJ, Walker LD, Matyunina LV, Logani S et al. <i>BMC Med Genomics</i> 2009 Dec 29;2:71.	12	-	-	-
GSE23391	Shahab SW, Matyunina LV, Mezencev R, Walker LD et al. <i>PLoS One</i> 2011;6(7):e22508.	5	-	-	-
GSE29450	Stany MP, Vathipadiekal V, Ozbun L, Stone RL et al. <i>PLoS One</i> 2011;6(7):e21121.	10	-	-	-
GSE20565	Meyniel JP, Cottu PH, Decraene C, Stern MH et al. <i>BMC Cancer</i> 2010 May 21;10:222.	-	-	18	47
GSE19352	Iorio E, Ricci A, Bagnoli M, Pisanu ME et al. <i>Cancer Res</i> 2010 Mar 1;70(5):2126-35.	1	-	3	14
GSE9891	Tothill RW, Tinker AV, George J, Brown R et al. <i>Clin Cancer Res</i> 2008 Aug 15;14(16):5198-208.	-	18	11	256
GSE26193	Mateescu B, Batista L, Cardon M, Gruosso T et al <i>Nat Med</i> 2011 Nov 20;17(12):1627-35.	-	-	7	100