Supplementary Materials: DNA Replication Licensing Protein MCM10 Promotes Tumor Progression and Is a Novel Prognostic Biomarker and Potential Therapeutic Target in Breast Cancer

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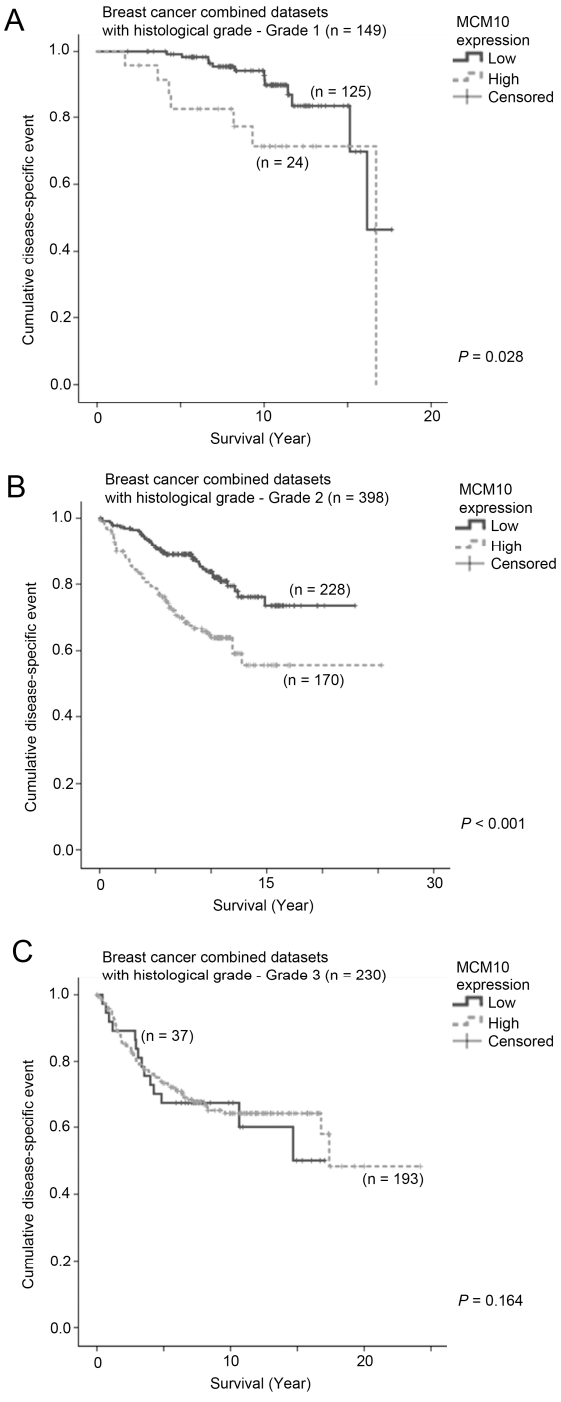

Figure S1. Breast cancer combined datasets with different histological grades.

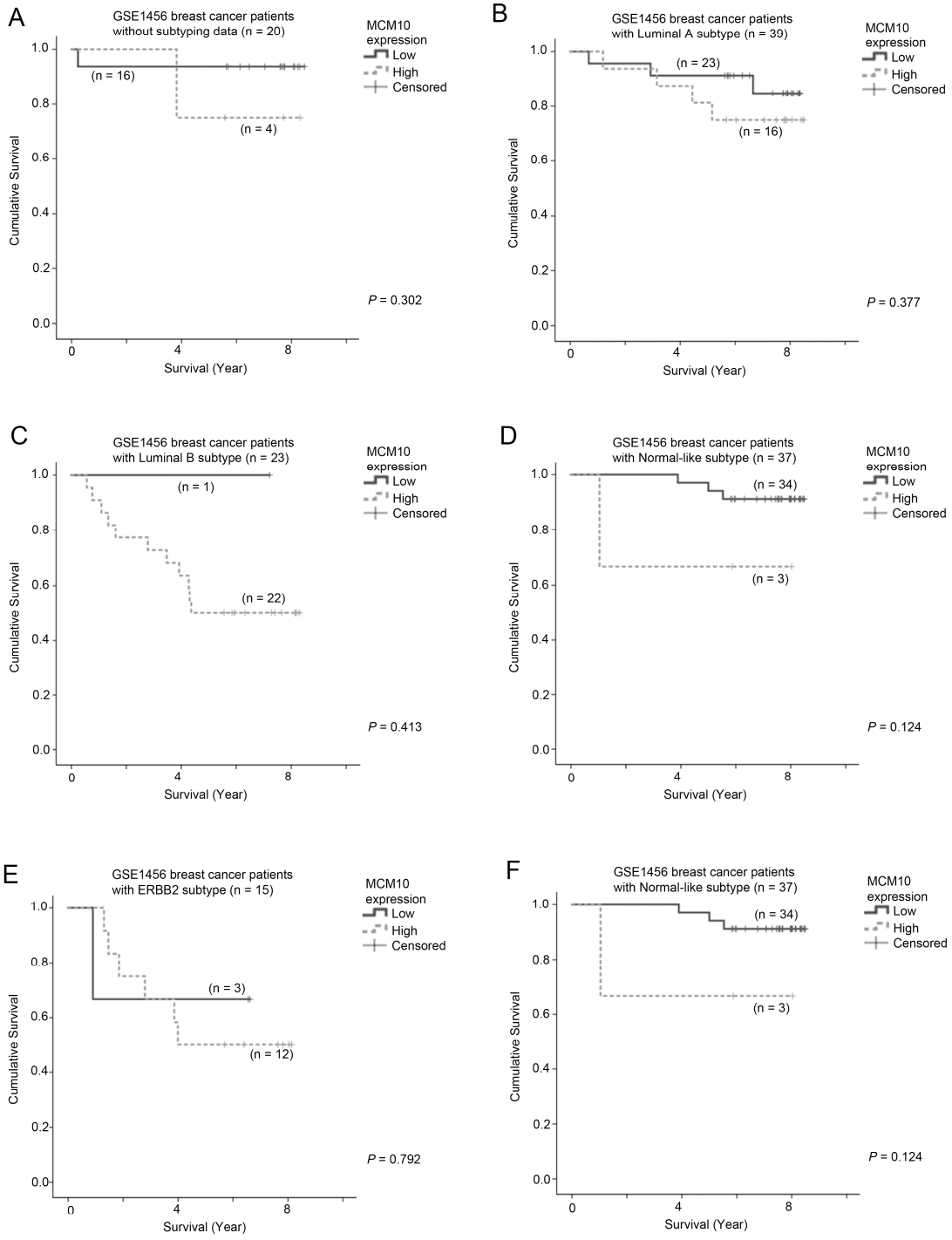

Figure S2. Breast cancer patient different subtypes.

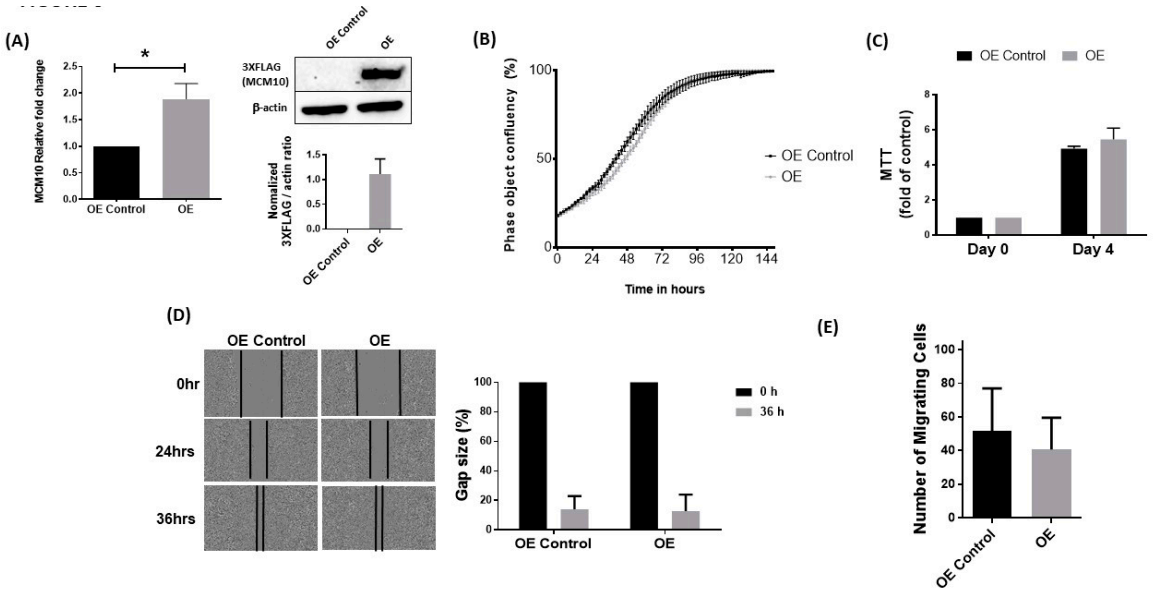

Figure S3. Relative expression of MCM10 in stable Overexpression (OE) in MCF 7 cell lines. (**A**) MCM10 expression was significantly increased in MCM10-OE MCF 7 cell lines assessed by qPCR and western blots (n = 3, * p < 0.05). (**B**) Cell proliferation in MCM10-OE MCF 7 cell lines showed no difference compared to OE control cells monitored for 7 days in Incucyte ZOOM analysis (n = 6) (**C**) MTT proliferation assay using stable cells showed no difference in proliferation rate of MCM10-OE MCF7 cells compared to OE control cells (n = 3). (**D**) Wound heal assay performed by using MCM10-OE MCF 7 in Incucyte ZOOM showed no difference. Wound heal quantified by relative Gap size using Incucyte ZOOM software (n = 6). (**E**) Transwell cell migration assay showed a similar observation with no difference in number of migrating cells in MCM10-OE MCF7 cells (n = 3).

Table S1. Clinicopathological parameters of patient samples used for qPCR analysis of MCM10.

NO.	Age	Location	Category	Tumor size（cm）	Grade	LND NO.	LNM NO.	Cadherin-E	P120	p63	ER	PR	HER2	ki-67	CK5/6	p53
1	48	Right	IDC	2.5 × 2 × 1.2	II	18	8	+			+, 95%	+, 90%	2+	(+, 20%	−	
2	48	Right	LCIS	2.5 × 1.5 × 1.5		15	0	−	cytoplasm, +	myoepithelium, +	+, 90%	+, 60%	2+	+, 10%	myoepithelium, +	
3	44	Left	IDC		II	20	0				+, 90%	+, 70%	3+	+, 20%	−	
4	38	Right	IDC	3.2 × 2.5	II	16	12	membrane, +	membrane, +		+, 90%	(+, 95%	−	+, 10%	−	
5	41	Right	IDC	The maximum diameter: 2 cm	II	19	1	membrane, +	membrane, +	−	+, 90%	+, 10%	2+	+, 20%	−	
6	36	Left	IDC		II	21	0	cytoplasm, +		−	+, 95%	+, 80%	3+	+, 30%	−	
7	37	Left	IDC		III	16	0	membrane, +	membrane, +		+, 70%	+, 50%	3+	+, 30%		
8	40	Left	IDC		I	29	0	membrane, +	membrane, +	myoepithelium, −	+, 60%	+, 80%	2+	+, 30%		+, <1%
9	59	Left	IDC	4.0 × 3.0 × 3.0	II	23	0	membrane, +	membrane, +	−	+, >95%	+, 20%	3+	+, 30%		+, <1%
10	56	Right	IDC		I	11	0	membrane, +	membrane, +		+, 100%	+, 90%	-	+, 20%		
11	68	Left	IDC		II	16	0	membrane, +	membrane, +		+, 80%	+, 1%	1+	+, 40%		+, 5%
12	60	Right	IDC	3.5 × 3× 2.6	III	16	0	membrane, +	Membrane, +	−	−	−	1+	+, 85%	+	
13	33	Left	IDC		II	22	9	+	+	−	+, 90%	+, 20%	2+	+, 8%	−	
14	43	Left	IDC			27	27	membrane, +	cytoplasm, +	−	+, 10%	+, 10%	3+	+, 40%		+, <1%
15	60	Left	IDC		II	23	1	+	membrane, +	−	+, 95%	+, 80%	3+	+, 20%	−	
16	34	Left	uncertain		II	24	22	membrane, +	membrane, +	+	+, 20%	+, 5%	−	+, 60%	+	

Note: IDC, Invasive Ductal Carcinoma; LCIS, lobular carcinoma in situ; LND, lymph node dissection; LNM, lymph node metastasis; +, positive; −, negative.