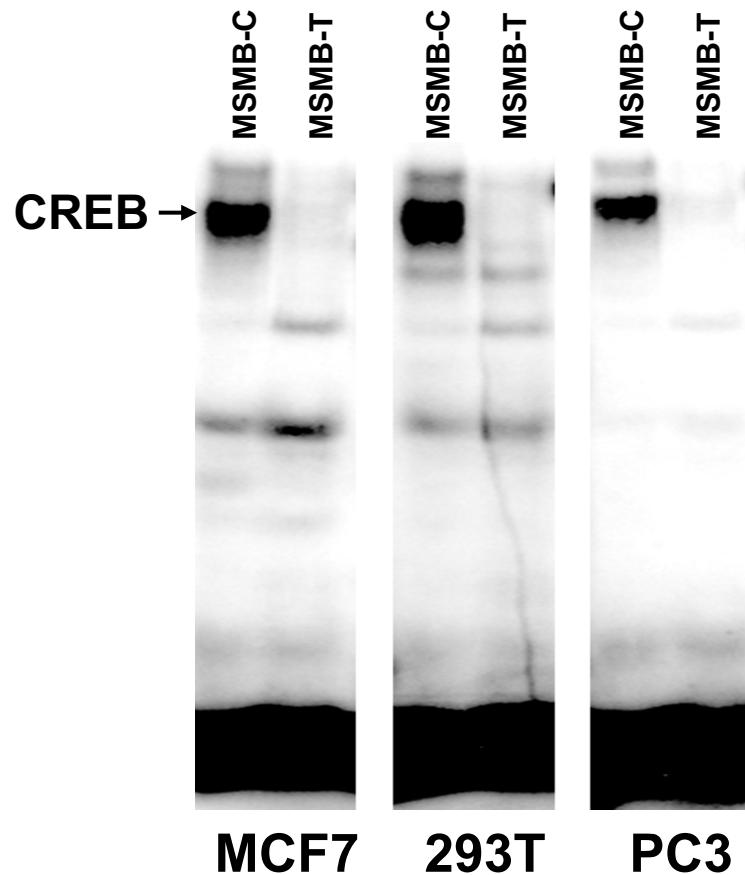


# Supporting Information

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**Fig. S1.** Electrophoretic mobility shift assay analysis performed on MCF7, 293T, and PC3 nuclear extracts corresponding to the CREB binding site of the *MSMB* promoter.

**Table S1. Quality control measures for *MSMB* SNPs**

Locus	CPS-II		ATBC study		CeRePP study		HPFS		PHS	
	Completion	HWP P	Completion	HWP P	Completion	HWP P	Completion	HWP P	Completion	HWP P
rs11004422	92.97	0.46	93.30	0.72	—	—	97.80	0.17	99.32	0.85
rs7071471	88.97	0.65	93.35	0.66	—	—	95.60	0.19	97.19	0.07
rs11593319	89.61	0.09	91.39	0.60	—	—	94.95	0.04	97.30	0.04
rs10826075	87.47	0.74	92.82	1.00	—	—	94.21	0.71	97.14	0.00
rs4630240	88.22	0.92	93.14	0.01	—	—	95.19	0.31	92.00	0.52
rs11006207	97.86	0.31	99.73	0.78	99.77	0.50	99.92	0.63	99.84	0.56
rs10826223	99.06	0.89	99.89	0.27	99.92	0.06	98.37	0.67	95.63	0.00
rs10993994	99.00	0.76	99.95	0.61	99.85	0.43	98.86	0.87	96.47	0.05
rs7076948	89.80	0.42	93.41	0.55	—	—	95.03	0.86	97.77	0.06
rs10994470	90.36	0.53	93.78	1.00	—	—	95.68	1.00	98.39	0.22
rs7904463	98.64	0.23	99.68	0.27	95.51	0.37	97.72	0.71	96.67	0.00
rs17178655	88.94	0.51	93.25	0.60	—	—	95.68	1.00	95.27	0.00
rs10994675	99.17	0.12	100.00	0.25	99.62	0.45	100.00	0.33	95.95	0.00

**Table S2. Minor allele frequency (MAF) estimates per study**

MAF locus	Alleles	Position	CPS-II		ATBC study		CeRePP study		HPFS		PHS	
			Control	Case	Control	Case	Control	Case	Control	Case	Control	Case
rs11004422	T, C	51168342	0.49	0.52	0.40	0.43			0.48	0.53	0.48	0.55
rs7071471	C, T	51173341	0.45	0.50	0.38	0.41			0.44	0.49	0.45	0.51
rs11593319	G, T	51195899	0.06	0.06	0.11	0.09			0.08	0.06	0.07	0.05
rs10826075	C, G	51197376	0.25	0.27	0.19	0.20			0.21	0.25	0.27	0.29
rs4630240	C, T	51202534	0.39	0.36	0.44	0.42			0.40	0.35	0.38	0.31
rs11006207	C, T	51208182	0.45	0.51	0.38	0.41	0.50	0.48	0.44	0.50	0.46	0.53
rs10826223	G, A	51208831	0.09	0.09	0.14	0.12	0.06	0.09	0.11	0.10	0.08	0.08
rs10993994	C, T	51219502	0.38	0.45	0.34	0.38	0.43	0.43	0.39	0.45	0.39	0.47
rs7076948	T, C	51228131	0.37	0.40	0.34	0.34			0.38	0.39	0.37	0.41
rs10994470	G, A	51228666	0.04	0.04	0.03	0.02			0.03	0.04	0.04	0.04
rs7904463	C, T	51229475	0.32	0.34	0.29	0.29	0.37	0.33	0.32	0.34	0.33	0.35
rs17178655	G, A	51231805	0.22	0.23	0.20	0.17			0.20	0.21	0.22	0.20
rs10994675	G, A	51233999	0.41	0.44	0.35	0.36	0.45	0.43	0.43	0.43	0.43	0.44

**Table S3. Association results per study**

Locus	Alleles	MAF	Subjects	Dichotomous						
				$\chi^2$	P	df	Het OR	95% CI	Hom OR	
<b>American Cancer Society</b>										
rs11004422	T, C	0.49	1,651 1,640	9.23	0.0099	2	1.04	(0.88–1.24)	1.31	(1.08–1.59)
rs7071471	C, T	0.47	1,573 1,583	16.96	2.07E-04	2	1.18	(1.00–1.40)	1.51	(1.24–1.85)
rs11593319	G, T	0.06	1,587 1,590	1.03	0.5980	2	0.96	(0.77–1.20)	0.63	(0.24–1.63)
rs10826075	C, G	0.27	1,551 1,551	4.89	0.0866	2	1.10	(0.95–1.27)	1.35	(1.01–1.79)
rs4630240	C, T	0.38	1,561 1,568	10.79	0.0045	2	0.92	(0.79–1.07)	0.69	(0.55–0.86)
rs11006207	C, T	0.48	1,749 1,721	25.09	3.56E-06	2	1.16	(0.99–1.36)	1.61	(1.33–1.95)
rs10826223	G, A	0.09	1,763 1,761	1.63	0.4419	2	0.93	(0.78–1.11)	0.67	(0.31–1.44)
rs10993994	C, T	0.42	1,760 1,757	44.12	2.63E-10	2	1.31	(1.12–1.52)	1.94	(1.59–2.36)
rs7076948	T, C	0.38	1,593 1,591	5.53	0.0629	2	1.05	(0.90–1.22)	1.29	(1.04–1.60)
rs10994470	G, A	0.04	1,601 1,602	1.54	0.2145	1	0.85	(0.66–1.10)	0.72	(0.43–1.21)
rs7904463	C, T	0.33	1,752 1,753	3.37	0.1856	2	1.11	(0.96–1.28)	1.19	(0.95–1.48)
rs17178655	G, A	0.23	1,573 1,582	0.84	0.6573	2	1.07	(0.92–1.24)	1.07	(0.78–1.47)
rs10994675	G, A	0.43	1,767 1,756	10.00	0.0067	2	1.22	(1.05–1.42)	1.30	(1.07–1.57)
<b>ATBC study</b>										
rs11004422	T, C	0.42	846 879	4.05	0.1322	2	1.05	(0.85–1.30)	1.32	(1.00–1.74)
rs7071471	C, T	0.39	850 875	3.75	0.1537	2	1.07	(0.87–1.32)	1.32	(1.00–1.76)
rs11593319	G, T	0.10	829 860	6.46	0.0395	2	0.74	(0.58–0.96)	1.50	(0.61–3.64)
rs10826075	C, G	0.20	842 873	0.52	0.7705	2	1.08	(0.88–1.32)	0.97	(0.58–1.63)
rs4630240	C, T	0.43	848 873	7.90	0.0192	2	0.74	(0.60–0.92)	0.90	(0.68–1.19)
rs11006207	C, T	0.39	918 928	3.70	0.1569	2	1.09	(0.89–1.33)	1.31	(0.99–1.73)
rs10826223	G, A	0.13	920 928	3.16	0.2064	2	0.82	(0.65–1.02)	0.93	(0.50–1.73)
rs10993994	C, T	0.36	921 928	5.96	0.0508	2	1.14	(0.94–1.39)	1.42	(1.07–1.89)
rs7076948	T, C	0.34	850 876	0.07	0.9633	2	0.98	(0.80–1.20)	1.03	(0.75–1.41)
rs10994470	G, A	0.03	853 880	1.35	0.2448	1	0.78	(0.51–1.19)	0.61	(0.26–1.42)
rs7904463	C, T	0.29	917 927	2.65	0.2657	2	0.90	(0.74–1.09)	1.17	(0.83–1.64)
rs17178655	G, A	0.18	848 875	6.54	0.0379	2	0.77	(0.63–0.95)	0.75	(0.44–1.28)
rs10994675	G, A	0.36	921 929	1.98	0.3722	2	1.00	(0.82–1.22)	1.21	(0.91–1.60)
<b>CeRePP study</b>										
rs11004422										
rs7071471										
rs11593319										
rs10826075										
rs4630240										
rs11006207	C, T	0.49	655 655	1.95	0.3779	2	0.83	(0.64–1.09)	0.84	(0.61–1.16)
rs10826223	G, A	0.07	656 656	6.78	0.0337	2	1.25	(0.90–1.73)	5.04	(1.08–23.55)
rs10993994	C, T	0.43	655 656	2.06	0.3566	2	0.86	(0.67–1.10)	1.02	(0.75–1.40)
rs7076948										
rs10994470										
rs7904463	C, T	0.35	627 627	4.30	0.1164	2	0.83	(0.65–1.05)	0.72	(0.50–1.03)
rs17178655										
rs10994675	G, A	0.44	654 654	3.03	0.2197	2	0.80	(0.62–1.03)	0.90	(0.66–1.23)
<b>HPFS</b>										
rs11004422	T, C	0.50	600 581	8.94	0.0114	2	0.98	(0.74–1.30)	1.48	(1.06–2.07)
rs7071471	C, T	0.47	588 565	10.65	0.0049	2	0.98	(0.74–1.29)	1.58	(1.13–2.21)
rs11593319	G, T	0.07	585 560	3.59	0.0580	1	0.72	(0.51–1.01)	0.52	(0.26–1.03)
rs10826075	C, G	0.23	583 553	4.75	0.0932	2	1.17	(0.91–1.50)	1.72	(0.99–2.99)
rs4630240	C, T	0.38	588 561	7.73	0.0209	2	0.73	(0.57–0.94)	0.67	(0.47–0.97)
rs11006207	C, T	0.47	611 595	9.43	0.0090	2	1.11	(0.85–1.45)	1.62	(1.17–2.24)
rs10826223	G, A	0.10	611 596	0.88	0.6437	2	0.87	(0.64–1.17)	1.02	(0.38–2.76)
rs10993994	C, T	0.42	603 590	8.59	0.0136	2	1.11	(0.86–1.44)	1.64	(1.17–2.30)
rs7076948	T, C	0.38	586 560	0.41	0.8149	2	0.97	(0.75–1.25)	1.08	(0.76–1.54)
rs10994470	G, A	0.04	589 565	2.72	0.0990	1	1.46	(0.93–2.31)	2.14	(0.86–5.34)
rs7904463	C, T	0.33	600 579	1.96	0.3762	2	0.98	(0.77–1.25)	1.28	(0.87–1.88)
rs17178655	G, A	0.21	589 565	0.64	0.7273	2	1.02	(0.80–1.32)	1.26	(0.72–2.21)
rs10994675	G, A	0.43	611 596	1.18	0.5555	2	0.91	(0.70–1.17)	1.06	(0.77–1.46)
<b>PHS</b>										
rs11004422	T, C	0.49	980 931	16.46	2.67E-04	2	1.25	(1.00–1.56)	1.68	(1.30–2.18)
rs7071471	C, T	0.48	952 918	13.31	0.0013	2	1.11	(0.89–1.38)	1.55	(1.21–1.99)
rs11593319	G, T	0.06	958 914	4.33	0.1146	2	0.74	(0.55–1.00)	0.67	(0.24–1.89)
rs10826075	C, G	0.28	954 915	2.06	0.3574	2	1.01	(0.83–1.23)	1.25	(0.92–1.71)
rs4630240	C, T	0.35	895 875	19.66	5.39E-05	2	0.68	(0.56–0.83)	0.58	(0.43–0.79)
rs11006207	C, T	0.49	983 938	20.63	3.31E-05	2	1.22	(0.98–1.51)	1.78	(1.38–2.30)
rs10826223	G, A	0.08	933 907	1.56	0.4576	2	0.98	(0.74–1.30)	1.51	(0.78–2.94)
rs10993994	C, T	0.43	950 906	21.46	2.19E-05	2	1.26	(1.02–1.55)	1.83	(1.41–2.36)
rs7076948	T, C	0.39	959 922	4.36	0.1129	2	1.09	(0.89–1.33)	1.32	(1.02–1.72)
rs10994470	G, A	0.04	970 923	0.43	0.5119	1	0.90	(0.65–1.24)	0.81	(0.42–1.54)
rs7904463	C, T	0.34	957 903	2.14	0.3432	2	1.11	(0.91–1.35)	1.20	(0.91–1.59)
rs17178655	G, A	0.21	934 899	6.73	0.0345	2	1.07	(0.87–1.32)	0.64	(0.44–0.93)
rs10994675	G, A	0.43	945 901	0.38	0.8257	2	1.01	(0.82–1.25)	1.08	(0.84–1.38)

Het, heterozygous; Hom, homozygous, OR, odds ratio.

**Table S4. *MSMB* expression in cancer cell lines and tissues**

Cell lines	<i>MSMB</i> expression, <i>MSMB</i> /18 sRNA*10 <sup>7</sup>	rs10993994 SNP	Tissue type
NCI 60 cancer cell lines			
T47D	12.0	CC	Breast
SNB 75	0.0	CC	CNS
U251	0.0	CC	CNS
SF-295	0.0	CC	CNS
SNB19	0.0	CC	CNS
HT29	0.0	CC	Colon
KM12	0.7	CC	Colon
HCC-2998	0.0	CC	Colon
HL-60	0.0	CC	Leukemia
NCI-H322	55.3	CC	Lung
NCI-H460	0.0	CC	Lung
HOP62	0.0	CC	Lung
A549	1.1	CC	Lung
UACC-257	0.0	CC	Melanoma
SK-MEL28	0.0	CC	Melanoma
M14	0.1	CC	Melanoma
MALME-3M	0.0	CC	Melanoma
OVCAR8	0.0	CC	Ovarian
DU145	0.2	CC	Prostate
TK-10	0.0	CC	Renal
ACHN	0.0	CC	Renal
RXF 393	0.0	CC	Renal
MB231	0.0	TC	Breast
MCF7	62.9	TC	Breast
HCT15	0.0	TC	Colon
HCT-116	0.0	TC	Colon
COLO 205	0.0	TC	Colon
CCRF-CEM	0.5	TC	Leukemia
SR	0.0	TC	Leukemia
NCIH226	0.0	TC	Lung
NCI-H522	0.0	TC	Lung
HOP92	0.0	TC	Lung
SK-MEL2	4.0	TC	Melanoma
LOX IMVI	0.0	TC	Melanoma
SK-OV3	0.0	TC	Ovarian
OVCAR3	0.1	TC	Ovarian
OVCAR5	0.0	TC	Ovarian
786–0	0.0	TC	Renal
SN-12C	0.0	TC	Renal
A498	0.0	TC	Renal
Cak-1	0.0	TC	Renal
UO-31	0.0	TC	Renal
BT549	0.0	TT	Breast
HS578T	0.1	TT	Breast
SF268	0.0	TT	CNS
SW-620	0.0	TT	Colon
RPMI 8226	0.0	TT	Leukemia
K562	0.2	TT	Leukemia
NCI-H23	0.0	TT	Lung
EKVX	0.1	TT	Lung
UACC-62	0.0	TT	Melanoma
SK-MEL5	0.0	TT	Melanoma
OVCAR 4	0.1	TT	Ovarian
IGROV1	0.0	TT	Ovarian
PC3	0.0	TT	Prostate
MDA-MB468	164.4	CC	Breast
SF-539	0.0	TT	CNS
MOLT4	1.5	TT	Leukemia
Other cell lines			
AGS	659.9	TC	Stomach
MCF10A	506.1	CC	Breast
NCIH660	2.4	CC	Prostate
Pca 2b	326.0	TC	Prostate
SKBR3	9.3	TC	Breast
PZ-HPV7	62.4	TC	Prostate
LNCaP	62.8	TC	Prostate
Tissues			
	8168.4		Prostatede normaltissue
	719.1		Prostate tumor tissue
	3422.0		Tracheanormaltissue