

### 1. Overview

EGF Phospho-Specific Array includes 214 highly specific and well-characterized phosphorylation antibodies related to the EGF family of proteins. The phospho-specific antibodies bind to and detect the protein only when phosphorylated at the specific site. The non-phospho pairs of the phospho-specific antibodies are included in the array to allow comparison based on phosphorylation state. Each antibody is printed with six replicates, and the arrays are printed on standard-size coated glass microscope slides and can be scanned on all microarray scanners that are compatible with 76 x 25 x 1 mm (3 in. x 1 in. x 1mm) slides.

### 2. Feature

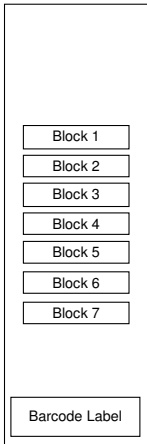
- Unique collection of phospho-specific antibodies and their non-phospho pairs
- Microarray format for high throughput expression profiling protein extracts from cells, frozen or FFPE tissues, or serum samples
- Each antibody is spotted with six replicates for more reliable and consistent results
- 3-D polymer based glass substrates
- High specificity and affinity; low background
- Suitable for detection on all fluorescent microarray scanners compatible with 76 x 25 x 1mm slides
- GenePix® Array List (GAL) files are provided for convenient and accurate data analysis
- Antibody Array Assay Kit provides optimized reagents and buffers for protein extraction, labeling, conjugation and detection

### 3. Application

- Protein expression profiling (Qualitative)
- Measure changes in phosphorylation status at specific sites
- Compare profiles of normal, diseased or treated samples
- Identify candidate biomarkers

### 4. Array Layout

	c1	c2	c3	c4	c5	c6	c7	c8	c9	c10	c11	c12	c13	c14	c15	c16	c17	c18	c19	c20	c21	c22	c23	c24	c25	c26	c27	c28	c29	c30	c31	c32	
<b>Block 1</b>	r1	P	E	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	r2	P	E	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	r3	P	E	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	r4	P	E	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	r5	P	E	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	r6	P	E	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
<b>Block 2</b>	r1	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
	r2	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
	r3	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
	r4	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
	r5	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
	r6	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
<b>Block 3</b>	r1	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
	r2	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
	r3	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
	r4	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
	r5	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
	r6	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
<b>Block 4</b>	r1	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
	r2	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
	r3	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
	r4	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
	r5	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
	r6	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
<b>Block 5</b>	r1	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
	r2	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
	r3	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
	r4	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
	r5	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
	r6	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
<b>Block 6</b>	r1	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
	r2	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
	r3	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
	r4	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
	r5	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
	r6	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189
<b>Block 7</b>	r1	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	A	G	N	N	E	E	P
	r2	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	A	G	N	N	E	E	P
	r3	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	A	G	N	N	E	E	P
	r4	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	A	G	N	N	E	E	P
	r5	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	A	G	N	N	E	E	P
	r6	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	A	G	N	N	E	E	P



A = Beta actin  
 E = Empty  
 G = GAPDH  
 N = Negative Control  
 P = Positive Marker

## 5. Antibody List

H=Human, M=Mouse, R=Rat

ID	Antibody Name	Reactivity	SwissProt Number	Notes
1	PKD1 (Phospho-Ser241)	HMR	O15530	
2	Raf1 (Phospho-Ser259)	HMR	P04049	
3	MEK-2 (Phospho-Thr394)	HMR	P36507	
4	STAT1 (Phospho-Tyr701)	HMR	P42224	
5	STAT3 (Phospho-Tyr705)	HMR	P40763	
6	STAT3 (Phospho-Ser727)	HMR	P40763	
7	AKT (Phospho-Ser473)	HMR	P31749	
8	AKT (Phospho-Thr308)	HMR	P31749	
9	FAK (Phospho-Tyr861)	HMR	Q05397	
10	HER2 (Phospho-Tyr877)	HMR	P04626	
11	HER2 (Phospho-Tyr1221/Tyr1222)	HMR	P04626	
12	HER2 (Phospho-Tyr1248)	HMR	P04626	
13	EGFR (Phospho-Ser1070)	HMR	P00533	
14	EGFR (Phospho-Tyr1092)	HMR	P00533	
15	Paxillin (Phospho-Tyr118)	HMR	P49023	
16	Caveolin-1 (Phospho-Tyr14)	HMR	Q03135	
17	Src (Phospho-Tyr418)	HMR	P12931	
18	Catenin beta (Phospho-Thr41/Ser45)	HMR	P35222	
19	FAK (Phospho-Tyr925)	HMR	Q05397	
20	IKK-alpha (Phospho-Thr23)	HMR	O15111	
21	VAV1 (Phospho-Tyr174)	HMR	P15498	
22	MKK3 (Phospho-Ser189)	HM	P46734	
23	JAK1 (Phospho-Tyr1022)	HMR	P23458	
24	JAK2 (Phospho-Tyr221)	HMR	P23458	
25	JAK2 (Phospho-Tyr1007)	HMR	P23458	
26	Src (Phospho-Tyr529)	HMR	P12931	
27	MEK1 (Phospho-Ser221)	HMR	Q02750	
28	STAT1 (Phospho-Ser727)	HMR	P42224	
29	SEK1/MKK4 (Phospho-Thr261)	HMR	P45985	
30	SEK1/MKK4 (Phospho-Ser80)	HM	P45985	
31	Paxillin (Phospho-Tyr31)	HMR	P49023	
32	Rac1/cdc42 (Phospho-Ser71)	HMR	P63000	
33	Raf1 (Phospho-Ser338)	HMR	P04049	
34	MEK1 (Phospho-Ser217)	HMR	Q02750	
35	Catenin beta (Phospho-Ser33)	HMR	P35222	
36	Catenin beta (Phospho-Ser37)	HMR	P35222	
37	EGFR (Phospho-Tyr1172)	HMR	P00533	
38	EGFR (Phospho-Tyr1197)	HMR	P00533	
39	EGFR (Phospho-Tyr869)	HMR	P00533	
40	p44/42 MAP Kinase (Phospho-Thr202)	HMR	P27361/P28482	
41	p44/42 MAP Kinase (Phospho-Tyr204)	HMR	P27361/P28482	
42	SAPK/JNK (Phospho-Thr183)	HMR	P45983/P45984/P53779	
43	SAPK/JNK (Phospho-Tyr185)	HMR	P45983/P45984/P53779	
44	EGFR (Phospho-Tyr1110)	HMR	P00533	
45	Dok-2 (Phospho-Tyr299)	HM	O60496	
46	Gab1 (Phospho-Tyr627)	HM	Q13480	
47	MEK1 (Phospho-Thr291)	HMR	Q02750	
48	EGFR (Phospho-Thr678)	HMR	P00533	
49	Shc (Phospho-Tyr349)	HMR	P29353	
50	Shc (Phospho-Tyr427)	H	P29353	
51	PKD1 (Ab-241)	HMR	O15530	
52	Raf1 (Ab-259)	HMR	P04049	
53	MEK-2 (Ab-394)	HMR	P36507	
54	STAT1 (Ab-701)	HMR	P42224	
55	STAT3 (Ab-705)	HMR	P40763	
56	STAT3 (Ab-727)	HMR	P40763	
57	AKT (Ab-473)	HMR	P31749	
58	AKT (Ab-308)	HMR	P31749	
59	HER2 (Ab-877)	HMR	P04626	
60	HER2 (Ab-1221/1222)	HMR	P04626	
61	HER2 (Ab-1248)	HMR	P04626	
62	EGFR (Ab-1070)	HMR	P00533	
63	EGFR (Ab-1092)	HMR	P00533	
64	FAK (Ab-861)	HMR	Q05397	
65	Catenin beta (Ab-41/45)	HMR	P35222	
66	Paxillin (Ab-118)	HMR	P49023	
67	Caveolin-1 (Ab-14)	HMR	Q03135	
68	Src (Ab-418)	HMR	P12931	

69	MKK3 (Ab-189)	HM	P46734	
70	JAK1 (Ab-1022)	HMR	P23458	
71	JAK2 (Ab-221)	HMR	P23458	
72	JAK2 (Ab-1007)	HMR	P23458	
73	SEK1/MKK4 (Ab-261)	HMR	P45985	
74	FAK (Ab-925)	HMR	Q05397	
75	IKK-alpha (Ab-23)	HMR	O15111	
76	VAV1 (Ab-174)	HMR	P15498	
77	Src (Ab-529)	HMR	P12931	
78	MEK1 (Ab-221)	HMR	Q02750	
79	STAT1 (Ab-727)	HMR	P42224	
80	Paxillin (Ab-31)	HMR	P49023	
81	Rac1/cdc42 (Ab-71)	HMR	P63000	
82	Raf1 (Ab-338)	HMR	P04049	
83	MEK1 (Ab-217)	HMR	Q02750	
84	FAK (Ab-397)	HMR	Q05397	
85	Catenin beta (Ab-37)	HMR	P35222	
86	EGFR (Ab-1172)	HMR	P00533	
87	EGFR (Ab-1197)	HMR	P00533	
88	EGFR (Ab-869)	HMR	P00533	
89	p44/42 MAP Kinase (Ab-202)	HMR	P27361/P28482	
90	p44/42 MAP Kinase (Ab-204)	HMR	P27361/P28482	
91	SAPK/JNK (Ab-183)	HMR	P45983/P45984/P53779	
92	SAPK/JNK (Ab-185)	HMR	P45983/P45984/P53779	
93	EGFR (Ab-1110)	HMR	P00533	
94	Dok-2 (Ab-299)	HM	O60496	
95	Gab1 (Ab-627)	HM	Q13480	
96	MEK1 (Ab-291)	HMR	Q02750	
97	EGFR (Ab-678)	HMR	P00533	
98	EGFR (Ab-693)	HMR	P00533	
99	Shc (Ab-349)	HMR	P29353	
100	MKK6 (Phospho-Ser207)	HM	P52565	
101	FAK (Phospho-Tyr397)	HMR	Q05397	
102	EGFR (Phospho-Thr693)	HMR	P00533	
103	FAK (Phospho-Tyr576)	HMR	Q05397	
104	IKK-alpha/beta (Phospho-Ser180/181)	HM	O15111/O14920	
105	IKK-beta (Phospho-Tyr188)	HMR	O14920	
106	IKK-gamma (Phospho-Ser31)	HM	Q9Y6K9	
107	EGFR (Phospho-Tyr1016)	HMR	P00533	
108	FAK (Phospho-Tyr407)	HMR	Q05397	
109	IKK-beta (Phospho-Tyr199)	HMR	O14920	
110	JNK1/2/3 (Phospho-Thr183/Tyr185)	HMR	P45983/P45984/P53779	
111	PAK1 (Phospho-Thr212)	HMR	Q13153	
112	PAK1/2/3 (Phospho-Thr423/402/421)	HMR	Q13153/Q13177/O75914	
113	Raf1 (Phospho-Tyr341)	HMR	P04049	
114	Raf1(Phospho-Ser621)	HMR	P04049	
115	c-Raf (Phospho-Ser296)	HMR	P04049	
116	MEK1 (Phospho-Ser298)	HMR	Q02750	
117	MEK1 (Phospho-Thr286)	HMR	Q02750	
118	Ras-GRF1 (Phospho-Ser916)	HMR	Q13972	
119	Gab1 (Phospho-Tyr659)	HMR	Q13480	
120	PKC pan activation site	HMR	P17252/P05771/Q05655/ Q02156/P05129/P24723/ Q04759/Q05513	
121	AKT (Phospho-Tyr326)	HMR	P31749	
122	Catenin beta (Phospho-Tyr654)	HMR	P35222	
123	c-Raf (Phospho-Ser43)	HMR	P04049	
124	EGFR (Phospho-Tyr1069)	HMR	P00533	
125	ERK3 (Phospho-Ser189)	HMR	Q16659	
126	ERK8 (Phospho-Thr175/Tyr177)	HM	Q8TD08	
127	FAK (Phospho-Ser910)	HMR	Q05397	
128	PAK1/2 (Phospho-Ser199)	HMR	Q13153	
129	IKK gamma (Phospho-Ser85)	HM	Q9Y6K9	
130	PI3-kinase p85-subunit alpha/gamma (Phospho-Tyr467/Tyr400)	HMR	P27986/Q92569	
131	PI3-kinase p85-alpha (Phospho-Tyr607)	HMR	P27986	
132	Rho/Rac guanine nucleotide exchange factor 2 (Phospho-Ser885)	HM	Q8TDA3	
133	VAV2 (Phospho-Tyr142)	HM	P52735	
134	Catenin beta (Phospho-Tyr489)	HMR	P35222	
135	MAP3K1/MEK1 (Phospho-Thr1381)	HMR	Q13233	
136	MKK3/MAP2K3 (Phospho-Thr222)	HMR	P46734	
137	MKK7/MAP2K7 (Phospho-Ser271)	HMR	O14733	
138	MKK7/MAP2K7 (Phospho-Thr275)	HMR	O14733	
139	PAK1 (Phospho-Ser204)	HMR	Q13153	
140	Src (Phospho-Ser75)	HMR	P12931	
141	Src (Phospho-Tyr216)	HMR	P12931	
142	GRB2 (Phospho-Ser159)	HMR	Q9UQC2	

143	PLCG1 (Phospho-Tyr771)	HMR	P19174	
144	PLCG1 (Phospho-Tyr783)	HMR	P19174	
145	PLCG2 (Phospho-Tyr753)	HMR	P16885	
146	CBL (Phospho-Tyr774)	HMR	P22681	
147	CBL (Phospho-Tyr700)	HMR	P22681	
148	PLCG1 (Phospho-Tyr1253)	HMR	P19174	
149	PLCG2 (Phospho-Tyr1217)	HMR	P16885	
150	SEK1/MKK4/JNK1 (Phospho-Ser257)	HMR	P45985	
151	MKK6 (Ab-207)	HM	P52564	
152	Catenin beta (Ab-33)	HMR	P35222	
153	Shc (Ab-427)	H	P29353	
154	FAK (Ab-576)	HMR	Q05397	
155	IKK-alpha/beta (Ab-180/181)	HM	O15111/O14920	
156	IKK-beta (Ab-188)	HMR	O14920	
157	IKK-gamma (Ab-31)	HM	Q9Y6K9	
158	EGFR (Ab-1016)	HMR	P00533	
159	FAK (Ab-407)	HMR	Q05397	
160	IKK-beta (Ab-199)	HMR	O14920	
161	JNK1/2/3 (Ab-183/185)	HMR	P45983/P45984/P53779	
162	PAK1 (Ab-212)	HMR	Q13153	
163	PAK1/2/3 (Ab-423/402/421)	HMR	Q13153/Q13177/O75914	
164	Raf1 (Ab-341)	HMR	P04049	
165	Raf1 (Ab-621)	HMR	P04049	
166	RhoA (Ab-188)	HM	P61586	
167	c-Raf (Ab-296)	HMR	P04049	
168	MEK1 (Ab-298)	HMR	Q02750	
169	MEK1 (Ab286)	HMR	Q02750	
170	Ras-GRF1 (Ab-916)	HMR	Q13972	
171	Gab1 (Ab-659)	HMR	Q13480	
172	PKC pan activation site	HMR	P17252/P05771/Q05655/ Q02156/P05129/P24723/ Q04759/Q05513	
173	AKT (Ab-326)	HMR	P31749	
174	Catenin beta (Ab-654)	HMR	P35222	
175	c-Raf (Ab-43)	HMR	P04049	
176	EGFR (Ab-1069)	HMR	P00533	
177	ERK3 (Ab-189)	HMR	Q16659	
178	FAK (Ab-910)	HMR	Q05397	
179	PAK1/2 (Ab-199)	HMR	Q13153	
180	IKK gamma (Ab-85)	HM	Q9Y6K9	
181	PI3-kinase p85-subunit alpha/gamma (Ab-467/199)	HMR	P27986/Q92569	
182	Rho/Rac guanine nucleotide exchange factor 2 (Ab-885)	HM	Q8TDA3	
183	VAV2 (Ab-142)	HM	P52735	
184	Catenin beta (Ab-489)	HMR	P35222	
185	MKK3/MAP2K3 (Ab-222)	HMR	P46734	
186	MKK7/MAP2K7 (Ab-271)	HMR	O14733	
187	PAK1 (Ab-204)	HMR	Q13153	
188	Raf1 (Ab-289)	HMR	P04049	
189	Src (Ab-75)	HMR	P12931	
190	GRB2 (Ab-159)	HMR	Q9UQC2	
191	SEK1/MKK4 (Ab-80)	HM	P45985	
192	PLCG1 (Ab-771)	HMR	P19174	
193	PLCG1 (Ab-783)	HMR	P19174	
194	PLCG2 (Ab-753)	HMR	P16885	
195	PLCG2 (Ab-1217)	HMR	P16885	
196	SEK1/MKK4/JNK1 (Ab-257)	HMR	P45985	
197	E-cadherin (N-term)	H	P12830	
198	ERK1/2 (N-term)	HMR	P27361/P28482	
199	NCK2 (C-term)	HM	O43639	
200	RAS(p21 H and K) (inter)	HMR	P01112/P01116/P01111	
201	MEKKK 4 (inter)	HM	Q95819	
202	IP3KA (C-term)	HMR	P23677	
203	JNKK (MKK4) (inter)	HMR	P45985	
204	MEKKK 1 (inter)	HM	Q92918	
205	IP3KC (inter)	H	Q96DU7	
206	RASE (inter)	H	Q7Z444	
207	RASF4 (inter)	HMR	Q9H2L5	
208	NCKX6 (inter)	HM	Q6J4K2	
209	EGF-Like Module-Containing Mucin-Like Receptor 1 (EMR1) (inter)	H	Q14246	
210	EGF-Like Module-Containing Mucin-Like Receptor 2 (EMR2) (inter)	H	Q9UHX3	
211	EGF-Like Module-Containing Mucin-Like Receptor 3 (EMR3) (inter)	H	Q9BY15	
212	IP6K3 (inter)	HM	Q96PC2	
213	IP6K2 (inter)	HMR	Q9UHH9	
214	PIP5K (inter)	HM	Q9Y2I7	