

# Phosphospecific Antibodies

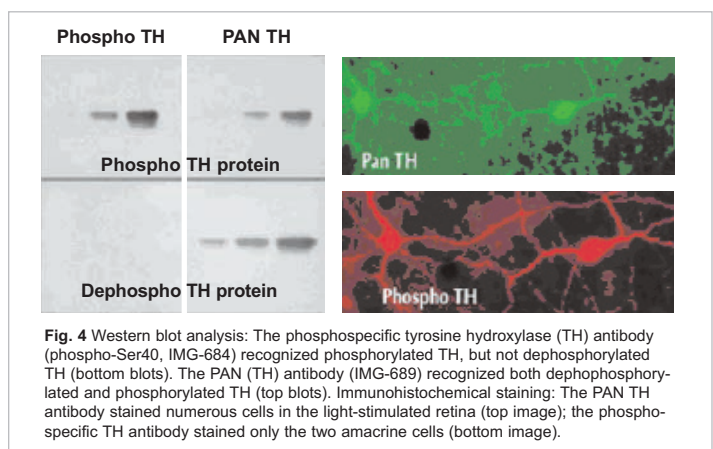
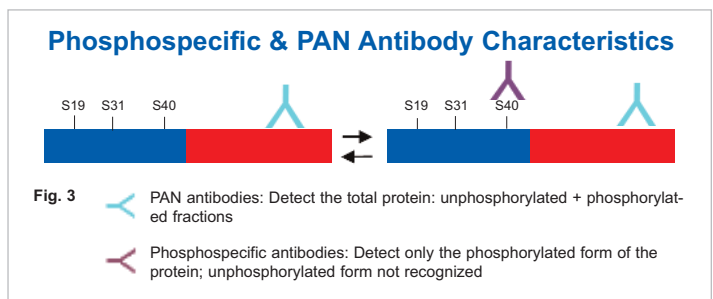
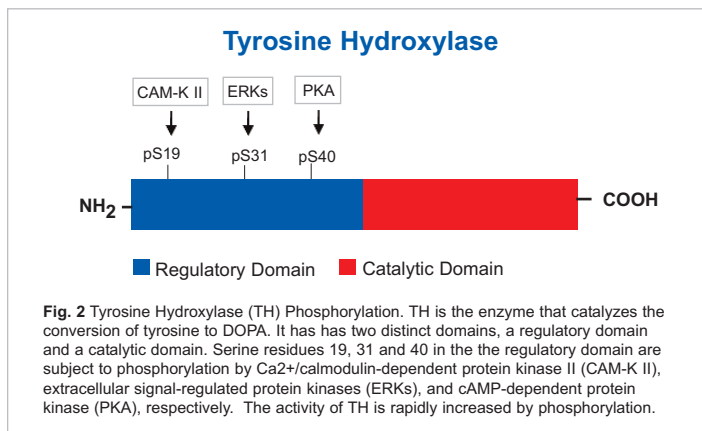
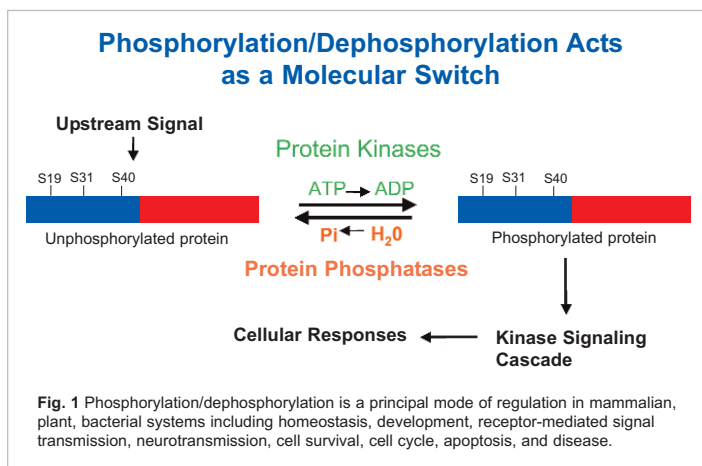
## Key tools for studying phosphorylation events by a variety of techniques

**P**rotein phosphorylation is a major mechanism that regulates protein activity in the cell. It is involved both directly and indirectly in regulating nearly all cellular processes where it serves as a molecular switch to turn protein activity on and off through cycles of phosphorylation/dephosphorylation events (Fig.1). Establishing that protein phosphorylation is a mechanism of cellular regulation in a particular system includes showing that the protein is phosphorylated, that the phosphorylation event changes the activity of the protein, and defining which amino acid(s) in the protein that the phosphate moiety is attached (Fig. 2).

Phosphospecific antibodies have emerged as key tools for studying phosphorylation events by a variety of techniques including western blot, ELISA, flow cytometry, and immunohistochemical analysis. These antibodies are directed specifically against phosphorylated antigens and a key attribute is that they do not recognize the unphosphorylated form of the protein (Fig. 3). In some exper-

iments it may advantageous to use both the phosphospecific and pan (non-phosphospecific) antibodies. The phosphospecific antibody will detect the fraction of protein that is phosphorylated, whereas the pan antibody will detect the total amount of the protein (Fig. 4). By using both antibodies researchers can verify the presence of a particular protein with the pan antibody irrespective of whether phosphorylation is present. Researchers can also determine associations between the quantity of total protein and phosphorylation using phosphodetection ELISAs such as the Phosphospecific-IkBa (Ser32/36) ELISA (IMGENEX, Cat. No. IMK-501).

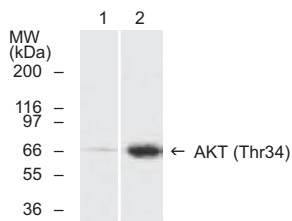
IMGENEX is addressing the growing need for phosphospecific antibodies by developing antibodies against a variety of targets. We have an active technology development program, please contact us for more information regarding commercializing your technology or collaborating with us to develop new technology at [bizdev@imgenex.com](mailto:bizdev@imgenex.com).



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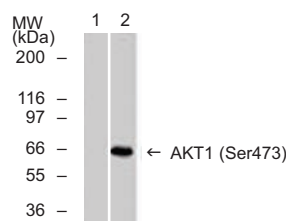
Description	Catalog No	Format	Host	Ab type	Species	Application
14-3-3 Protein (Ser58)	IMG-5381	P, AP	Rabbit	N/A	R	WB
14-3-3 ζ (Ser58)	IMG-90268-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
4E-BP1 (Thr36)	IMG-90292-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
4E-BP1 (Thr45)	IMG-90293-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
5-Lipoxygenase (Ser523)	IMG-5399	P, AP	Rabbit	N/A	H	WB
ADD1 (Ser726)	IMG-90269-1	P, AP	Rabbit	N/A	H, M, R	WB
AFX (Ser197)	IMG-90235-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
AKT (Thr308)	IMG-90167-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
AKT (Thr34)	IMG-5775	P, AP	Rabbit	N/A	H, Ra, R	WB
AKT1 (Ser473)	IMG-187A	P	Mouse	104A282	H, M	IP, WB
	IMG-187B	B	Mouse	104A282	H, M	ELISA, IP, WB
AKT2 (Ser474)	IMG-90223-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
alpha Synuclein (Ser129)	IMG-5854	P, AP	Rabbit	N/A	Bo, H, M	WB
AMPK1 (Thr174)	IMG-90270-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
AMPK1/AMPK2 (Ser485/Ser491)	IMG-90262-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Androgen Receptor (Ser213/210)	IMG-561	P	Mouse	156C135.2	H	WB
Aquaporin 2 (Ser261)	IMG-5993	P, AP	Rabbit	N/A	M, R	WB
ASK1 (Ser83)	IMG-90266-1	P, AP	Rabbit	N/A	H	WB, IHC-P
ASK1 (Ser966)	IMG-90267-1	P, AP	Rabbit	N/A	H, M	IHC-P
ATF2 (Ser112/Ser94)	IMG-90149-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
ATF2 (Ser490/Ser498)	IMG-5040	P, AP	Rabbit	N/A	H	WB, IHC-Fr
ATF2 (Ser62/Ser44)	IMG-90145-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
ATF2 (Thr69/Ser51)	IMG-90146-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
ATF2 (Thr71/Ser53)	IMG-90147-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
ATF2 (Thr71)	IMG-350A	P	Mouse	103C411.2	H	WB
	IMG-350B	B	Mouse	103C411.2	H	ELISA, WB
ATF2 (Thr73 or 55)	IMG-90148-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
ATF4 (Ser245)	IMG-90166-1	P, AP	Rabbit	N/A	H	IHC-P
ATM (Ser1981)	IMG-90221-1	P, AP	Rabbit	N/A	H, M	IHC-P
BAD (Ser112)	IMG-90179-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
BAD (Ser155)	IMG-90180-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
β-Catenin (Ser33/Ser37)	IMG-5397	P, AP	Rabbit	N/A	H	WB
β-Catenin (Tyr142)	IMG-5779	P, AP	Rabbit	N/A	H, M, R	WB
β-Catenin (Ser641)	IMG-90356-1	P, AP	Rabbit	N/A	H, M	WB
β-Catenin (Ser33)	IMG-90288-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
β-Catenin (Ser37)	IMG-90289-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
β-Catenin (Thr41/Ser45)	IMG-90217-1	P, AP	Rabbit	N/A	H, M, R	WB
BCL-2 (Ser70)	IMG-90177-1	P, AP	Rabbit	N/A	H	IHC-P
BCL-2 (Thr56)	IMG-90176-1	P, AP	Rabbit	N/A	H	IHC-P
BCL-XL (Ser62)	IMG-90178-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Bcr (Tyr177)	IMG-90279-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
BIM (Ser69/65)	IMG-90336-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
BRCA1 (Ser1423)	IMG-90307-1	P, AP	Rabbit	N/A	H	WB, IHC-P
BRCA1 (Ser1524)	IMG-90218-1	P, AP	Rabbit	N/A	H	IHC-P
c-Abl (Tyr245)	IMG-5776	P, AP	Rabbit	N/A	H, M, R	WB

## AKT (Thr34) (IMG-5775)



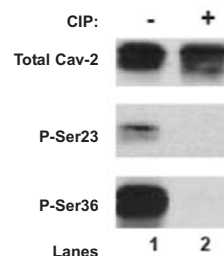
Western blot analysis of A431 cells (20 ug/lane) serum starved overnight (lane 1) and Calyculin A (10nM) treated for 30 minutes (lane 2) using IMG-5775, Phospho-AKT (Thr34).

## AKT1 (Ser473) (IMG-187A)



Western blot analysis of Phospho- AKT1 using IMG-187A in untreated (lane 1) and PDGF treated (lane 2) NIH-3T3 lysate.

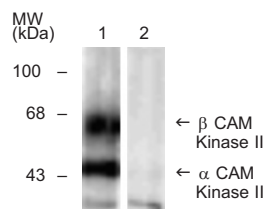
## Caveolin-2 [Pan (IMG-5015), Ser23 (IMG-5013), Ser36 (IMG-5014)]



Western blot analysis: Lysates from LNCaP cells expressing nonphosphorylated and phosphorylated Caveolin-2 were left untreated (-) or treated with (+) calf intestinal phosphatase (CIP). The pan Caveolin-2 (Cav-2) antibody (IMG-5015) recognized both the untreated (lane 1, top panel) and CIP-treated (lane 2, top panel) lysates. In contrast, the phosphospecific Caveolin-2 antibodies Ser23 (IMG-5013) and Ser36 (IMG-5014) recognized the untreated (lane 1, middle and bottom panels), but not the CIP-treated lysates (lane 2, middle and bottom panels).

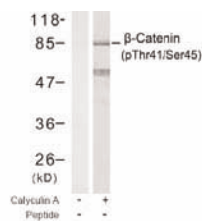
Description	Catalog No	Format	Host	Clone	Species	Application
c-Abl (Tyr412)	IMG-5777	P, AP	Rabbit	N/A	H, M, R	WB
c-Abl (Tyr412)	IMG-90224-1	P, AP	Rabbit	N/A	H, M	IHC-P
CAM Kinase II (Thr286)	IMG-667	P, AP	Rabbit	N/A	Multi	WB
CAM Kinase II (Thr305)	IMG-5039	S	Rabbit	N/A	R	WB
CaM Kinase II (Thr286)	IMG-90335-1	P, AP	Rabbit	N/A	H, M, R	WB
CARM1 (Ser228)	IMG-90357-1	P, AP	Rabbit	N/A	H, M, R	WB
Caveolin-1 (Tyr14)	IMG-90200-1	P, AP	Rabbit	N/A	H, M, R	WB
Caveolin-2 (Ser23)	IMG-5013	P, AP	Rabbit	N/A	H	WB
Caveolin-2 (Ser36)	IMG-5014	P, AP	Rabbit	N/A	H	WB
CDC2 (Thr161)	IMG-90233-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
CDC2 (Tyr15)	IMG-668	P, AP	Rabbit	N/A	Multi	WB
CDC2 (Tyr15)	IMG-90308-1	P, AP	Rabbit	N/A	H, M, R	WB
CDC25A (Ser75)	IMG-90236-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
CDC25C (Ser216)	IMG-90219-1	P, AP	Rabbit	N/A	H	IHC-P
CDK2 (Thr160)	IMG-90232-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Chk1 (Ser345)	IMG-90220-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Chk2 (Ser516)	IMG-90243-1	P, AP	Rabbit	N/A	H	WB
Chk2 (Thr68)	IMG-90173-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Ser243)	IMG-90141-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Ser63)	IMG-90118-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Ser73)	IMG-90120-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Thr239)	IMG-90140-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Thr91)	IMG-90137-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Thr93)	IMG-90138-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
c-Jun (Tyr170)	IMG-90139-1	P, AP	Rabbit	N/A	H, M, R	WB
c-Kit (Tyr721)	IMG-90306-1	P, AP	Rabbit	N/A	H, M, R	WB
Cofilin (Ser3)	IMG-90237-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Cofilin 1 (Ser3)	IMG-5781	P, AP	Rabbit	N/A	H, M, R	WB
Connexin43 (Ser367)	IMG-90319-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Connexin43 (Ser368)	IMG-5377	P, AP	Rabbit	N/A	R	WB
Cortactin (Tyr466)	IMG-90327-1	P, AP	Rabbit	N/A	M, H	WB
CREB (Ser133)	IMG-5395	P, AP	Rabbit	N/A	R	WB
c-Src (Tyr215)	IMG-5789	P, AP	Rabbit	N/A	H, M, R	WB
DARPP-32 (Thr34)	IMG-5041	P, AP	Rabbit	N/A	H, M, R	WB
DARPP-32 (Thr75)	IMG-5042	P, AP	Rabbit	N/A	H, M, R	WB
DNA PKcs (Thr2609)	IMG-90259-1	P, AP	Rabbit	N/A	H	WB
Dynamin (Ser774)	IMG-669	P, AP	Sheep	N/A	H, M, R	IF/ICC, IHC, WB
Dynamin (Ser778)	IMG-670	P, AP	Sheep	N/A	M, H, R	WB
EGFR (Ser1070)	IMG-90190-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
EGFR (Thr678)	IMG-90272-1	P, AP	Rabbit	N/A	H, M, R	WB
EGFR (Thr693)	IMG-90273-1	P, AP	Rabbit	N/A	H, M, R	WB
EGFR (Tyr869)	IMG-90298-1	P, AP	Rabbit	N/A	H, M, R	WB
EGFR (Tyr1092)	IMG-90191-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
EGFR (Tyr1110)	IMG-90323-1	P, AP	Rabbit	N/A	H, M, R	WB
EGFR (Tyr1172)	IMG-90290-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P

#### CAM Kinase II (Thr305) (IMG-5039)



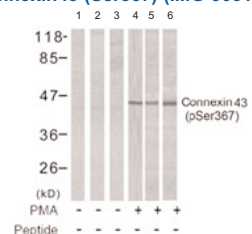
Western blot analysis of 10 µg of rat brain lysate showing specific immunolabeling of α- and β-CaM Kinase II phosphorylated at Thr305 (Lane 1). The labeling by the antibody to CaM Kinase II Thr305 is specifically blocked by the Thr305 phosphopeptide used as antigen (Lane 2).

#### β-Catenin (Thr41/Ser45) (IMG-90217-1)



Western blot analysis of β-Catenin (Thr41/Ser45) (Lanes 3 and 4) using IMG-90217-1 in SW626 cell.

#### Connexin43 (Ser367) (IMG-90319-1)

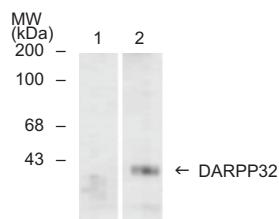


Western blot analysis of Connexin43 (Ser367) using IMG-90319-1 in HeLa (Lanes 1 and 4), K562 (Lanes 2 and 5) and 293 (Lanes 3 and 6) cells, untreated or treated with PMA (1µM 30min).

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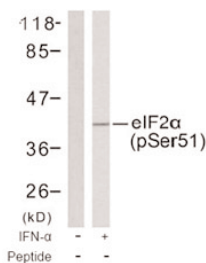
Description	Catalog No	Format	Host	Ab type	Species	Application
EGFR (Tyr1197)	IMG-90297-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
eIF2 $\alpha$ (Ser51)	IMG-90331-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
eIF4E (Ser209)	IMG-90302-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Elk (Ser383)	IMG-671	P, AP	Rabbit	N/A	M, H, R	WB
Elk1 (Ser383)	IMG-90121-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Elk1 (Ser389)	IMG-90153-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Elk1 (Thr417)	IMG-90154-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
EphrinB (Tyr298)	IMG-5378	P, AP	Rabbit	N/A	R	WB
EphrinB (Tyr317)	IMG-5379	P, AP	Rabbit	N/A	Ch	WB
EphrinB (Tyr331)	IMG-5380	P, AP	Rabbit	N/A	Ch	WB
ERK1/2 (T202/Y204)	IMG-672	P, AP	Rabbit	N/A	Multi	WB
Estrogen Receptor- $\alpha$ (Ser104)	IMG-90181-1	P, AP	Rabbit	N/A	H	IHC-P
Estrogen Receptor- $\alpha$ (Ser106)	IMG-90182-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
Estrogen Receptor- $\alpha$ (Ser118)	IMG-90183-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
Estrogen Receptor- $\alpha$ (Ser167)	IMG-90184-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
Ezrin (Thr566)	IMG-90281-1	P, AP	Rabbit	N/A	H, M, R	WB
Ezrin (Tyr353)	IMG-90175-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
FAK (Tyr861)	IMG-90171-1	P, AP	Rabbit	N/A	H, M, R	WB
FAK (Tyr925)	IMG-90222-1	P, AP	Rabbit	N/A	H, M, R	WB
FKHR (Ser256)	IMG-90216-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
FKHR (Ser319)	IMG-90234-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
FKHRL1 (Ser253)	IMG-90250-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
G3BP-1 (Ser232)	IMG-90192-1	P, AP	Rabbit	N/A	H	WB, IHC-P
Gab1 (Tyr627)	IMG-90338-1	P, AP	Rabbit	N/A	H, M	WB
GABA B Receptor (Ser892), R2-Subunit	IMG-5396	P, AP	Rabbit	N/A	R	WB
GABAB R1 (Ser923)	IMG-5999	P, AP	Rabbit	N/A	Multi	WB
GABAB R2 (Ser783)	IMG-5998	P, AP	Rabbit	N/A	Multi	WB
Gap43 (Ser41)	IMG-673	P, AP	Rabbit	N/A	M, H, R	WB
GATA1 (Ser142)	IMG-90156-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
GATA1 (Ser310)	IMG-90157-1	P, AP	Rabbit	N/A	H, M, R	WB
GluR1 (Ser849)	IMG-90321-1	P, AP	Rabbit	N/A	H, M, R	WB
Glutamate Receptor 2 (Precursor) (Ser880)	IMG-90339-1	P, AP	Rabbit	N/A	H, M, R	WB
Glycogen Synthase Kinase 3/FRAT2/GSK-3 (Ser9)	IMG-5865	P, AP	Rabbit	N/A	Multi	WB
GSK3 $\alpha$ (Ser21)	IMG-90124-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
GSK3 $\beta$ (Ser9)	IMG-90119-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
GSK3 $\beta$ (Tyr216)	IMG-90343-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
HDAC4 (Ser632)	IMG-90275-1	P, AP	Rabbit	N/A	H.M.R	WB
HDAC5 (Ser498)	IMG-90276-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
HDAC7 (Ser155)	IMG-6125A	P, AP	Rabbit	N/A	Multi	WB
HDAC7 (Ser318)	IMG-6126A	P, AP	Rabbit	N/A	Multi	WB
HDAC8 (Ser39)	IMG-90227-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
HER2 (Tyr1221)	IMG-90186-1	P, AP	Rabbit	N/A	H	WB
HER2 (Tyr1248)	IMG-90189-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
HER2 (Tyr877)	IMG-90185-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Histone H2A.X (Ser139)	IMG-90325-1	P, AP	Rabbit	N/A	H, M, R	WB
Histone H3/PHH3 (Ser28)	IMG-371	P	Mouse	117C826	H	WB

## DARPP32 (Thr75) (IMG-5042)



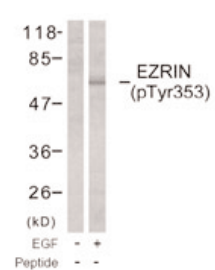
Immunolabeling of rat caudate lysates prepared from caudate slices that had been incubated in the absence (Lane 1) and presence of okadaic acid (Lane 2). The labeling by the antibody to DARPP32 Thr75 is markedly increased by the okadaic acid treatment.

## eIF2 $\alpha$ (Ser51) (IMG-90331-1)



Western blot analysis of eIF2 $\alpha$  (Ser51) using IMG-90331-1 in K562 cells untreated or treated with IFN- $\alpha$  (100ng/ml, 20min).

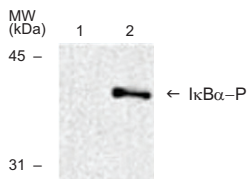
## Ezrin (Tyr353) (IMG-90175-1)



Western blot analysis of Ezrin (Tyr353) using IMG-90175-1 in A431 cells.

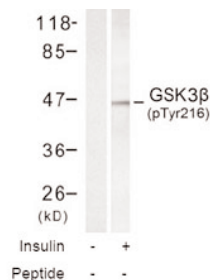
Description	Catalog No	Format	Host	Clone	Species	Application
Histone H3.1 (Ser10)	IMG-90271-1	P, AP	Rabbit	N/A	H.M.R	WB, IHC-P
HSF1 (Ser303)	IMG-90322-1	P, AP	Rabbit	N/A	H	WB, IHC-P
Hsp27 (Ser15)	IMG-638	P, AP	Rabbit	N/A	Multi	WB
HSP27 (Ser15)	IMG-90257-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
HSP27 (Ser78)	IMG-90311-1	P, AP	Rabbit	N/A	H	WB, IHC-P
HSP27 (Ser82)	IMG-90312-1	P, AP	Rabbit	N/A	H	WB, IHC-P
HSP90B (Ser254)	IMG-90277-1	P, AP	Rabbit	N/A	H, M, R	WB
ICAM-1 (Tyr512)	IMG-90193-1	P, AP	Rabbit	N/A	H, M, R	WB
IGF-1R (Tyr1161)	IMG-90197-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
IGF-1R (Tyr1165/Tyr1166)	IMG-90198-1	P, AP	Rabbit	N/A	H, M, R	WB
IkB $\alpha$ (Ser32/Ser36)	IMG-156A	P	Mouse	39A1413	H, M	ELISA, IP, WB
	IMG-156B	B	Mouse	39A1413	H, M	ELISA, IP, WB
IkB $\alpha$ (Ser32/Ser36)	IMG-90247-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
IkB $\alpha$ (Tyr42)	IMG-5782	P, AP	Rabbit	N/A	H, M, R	IP, WB
IkB $\alpha$ (Tyr42)	IMG-90255-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
IkB $\alpha$ (Tyr305)	IMG-5783	P, AP	Rabbit	N/A	H, M, R	WB
IkB- $\beta$ (Ser23)	IMG-90344-1	P, AP	Rabbit	N/A	H,(M,R)	IHC-P
IkB- $\epsilon$ (Ser22)	IMG-90284-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
IKK $\alpha$ (Thr23)	IMG-90228-1	P, AP	Rabbit	N/A	H.M.R	WB, IHC-P
Integrin $\beta$ 3 (Tyr773)	IMG-90172-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
Integrin $\beta$ 3 (Tyr785)	IMG-90333-1	P, AP	Rabbit	N/A	H, M, R	WB
Interferon Receptor, Type I, Subunit I (Ser535/539)	IMG-5043	P, AP	Rabbit	N/A	Multi	WB
IRS-1 (Ser307)	IMG-90304-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
IRS-1 (Ser312)	IMG-90239-1	P, AP	Rabbit	N/A	H, M, R	WB
IRS-1 (Ser636)	IMG-90299-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
IRS-1 (Ser639)	IMG-90300-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
JAK1 (Tyr1022)	IMG-90244-1	P, AP	Rabbit	N/A	H.M.R	WB, IHC-P
JAK2 (Tyr221)	IMG-90245-1	P, AP	Rabbit	N/A	H.M.R	IHC-P
JAK2 (Tyr1007)	IMG-90246-1	P, AP	Rabbit	N/A	H.M.R	IHC-P
JunB (Ser79)	IMG-90142-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
JunB (Ser259)	IMG-90143-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
JunD (Ser255)	IMG-90144-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Keratin 18 (Ser33)	IMG-90345-1	P, AP	Rabbit	N/A	H	IHC-P
Kidins220 (Ser919)	IMG-4117	P	Rabbit	N/A	H	WB
Lck (Tyr393)	IMG-90240-1	P, AP	Rabbit	N/A	H, M, R	WB
LIMK1 (Thr508)	IMG-90225-1	P, AP	Rabbit	N/A	H	WB, IHC-P
LIMK2 (Thr505)	IMG-90226-1	P, AP	Rabbit	N/A	H	WB, IHC-P
MAPKAPK-2 (Thr334)	IMG-90346-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
MARCKS (Ser152/156)	IMG-676	P, AP	Rabbit	N/A	Multi	WB
MARCKS (Ser158)	IMG-90340-1	P, AP	Rabbit	N/A	H, M, R	WB
MEF2A (Ser408)	IMG-90347-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
MEF2A (Thr312)	IMG-90155-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
MEK1 (Ser217)	IMG-90282-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
MEK1 (S218/222)/MEK2 (S222/226)	IMG-6133A	P, AP	Rabbit	N/A	Multi	WB
MEK1 (Ser221)	IMG-90254-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P

#### IkB $\alpha$ (Ser32/36) (IMG-156A)



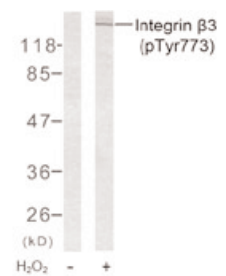
Jurkat cells were treated for 30 min with 100  $\mu$ g/ml ALLN (N-Acetyl-Leu-Leu-Norleucinal; a Calpain inhibitor and also proteasome inhibitor that prevents IkB $\alpha$  dephosphorylation) followed by incubation with (Lane 2) or without 1 nM TNF- $\alpha$  (Lane 1). The membranes were blotted with IMG-156 (Lanes 1 & 2) and immunoreactivity was detected by ECL. The data shows that IMG-156 detects specifically the phosphorylated form of IkB $\alpha$ .

#### GSK3 $\beta$ (Tyr216) (IMG-90343-1)



Western blot analysis of GSK3 $\beta$  (Tyr216) using IMG-90343-1 in 293 cells, untreated or treated with insulin (40uM, 30min).

#### Integrin $\beta$ 3 (Tyr773) (IMG-90172-1)

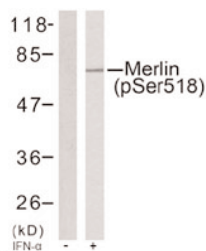


Western blot analysis of Integrin  $\beta$ 3 (phospho-Tyr773) using IMG-90172-1 in HL-60 cells.

# Phosphospecific Antibodies

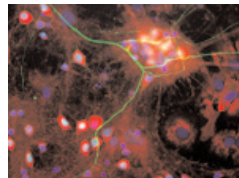
Description	Catalog No	Format	Host	Ab type	Species	Application
MEK1 (Thr292)	IMG-5044	P, AP	Rabbit	N/A	H	WB
MEK1 (Thr386)	IMG-5045	P, AP	Rabbit	N/A	H	WB
MEK1/2 (S218/222)	IMG-677	P, AP	Rabbit	N/A	Multi	WB
MEK2 (Thr394)	IMG-90125-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
MEK5 (Ser311/Thr315)	IMG-5994	P, AP	Rabbit	N/A	Multi	WB
Merlin (Ser518)	IMG-90324-1	P, AP	Rabbit	N/A	H, M, R	WB
Met (Tyr1234)	IMG-90296-1	P, AP	Rabbit	N/A	H, M, R	WB
Met (Tyr1349)	IMG-90305-1	P, AP	Rabbit	N/A	H, M, R	WB
Metabotropic Glutamate Receptor (GluR1 [Ser831])	IMG-674	P, AP	Rabbit	N/A	H, M, R	WB
Metabotropic Glutamate Receptor (GluR1 [Ser845])	IMG-675	P, AP	Rabbit	N/A	R	WB
MKK3 (Ser189)	IMG-90241-1	P, AP	Rabbit	N/A	H, R	WB, IHC-P
MKK6 (Ser207)	IMG-90242-1	P, AP	Rabbit	N/A	H, R	WB, IHC-P
mTOR (Ser2448)	IMG-90291-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Munc-18 (Ser515)	IMG-5867	P, AP	Rabbit	N/A	R	WB
Myc (Ser373)	IMG-90152-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Myc (Thr358)	IMG-90151-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Myc (Thr58)	IMG-90150-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
MyoD (Ser200)	IMG-90187-1	P, AP	Rabbit	N/A	H, M, R	WB
Neurofilament NF-H Phospho	IMG-5018A	A	Mouse	NAP4	Multi	IF/ICC, IHC, WB
NF-κB p65 (Ser276)	IMG-90128-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p65 (Ser311)	IMG-90320-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p65 (Ser468)	IMG-90130-1	P, AP	Rabbit	N/A	H, M, R	WB
NF-κB p65 (Ser529)	IMG-90287-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p65 (Ser536)	IMG-90131-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p65 (Thr254)	IMG-90127-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p65 (Thr435)	IMG-90129-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p100/p52 (Ser865)	IMG-90132-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p100/p52 (Ser869)	IMG-90133-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p105/p50 (Ser337)	IMG-90134-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p105/p50 (Ser893)	IMG-90135-1	P, AP	Rabbit	N/A	H	IHC-P
NF-κB p105/p50 (Ser907)	IMG-90136-1	P, AP	Rabbit	N/A	H	WB, IHC-P
NF-κB p105/p50 (Ser927)	IMG-90348-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NF-κB p105/p50 (Ser927)	IMG-90588-1	P, AP	Rabbit	N/A	H, M, R	WB
NF-κB p105/p50 (Ser932)	IMG-90314-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
NMDA NR2B (Tyr1472)	IMG-678	P, AP	Rabbit	N/A	H, M, R	WB
NMDA NR2B Subunit (Tyr1252)	IMG-5382	P, AP	Rabbit	N/A	R	WB
NMDA NR2B Subunit (Tyr1336)	IMG-5383	P, AP	Rabbit	N/A	R	WB
NMDA Receptor NR2B Subunit (Ser1480)	IMG-6000	P, AP	Rabbit	N/A	Multi	WB
N-WASP (Ser484/485)	IMG-5792	P, AP	Rabbit	N/A	H, M, R	WB
N-WASP (Ser484/485)	IMG-5793	P, AP	Rabbit	N/A	H, M, R	WB
N-WASP (Tyr256)	IMG-5794	P, AP	Rabbit	N/A	H, M, R	WB
p27Kip1 (Thr187)	IMG-90283-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
P38 MAPK (Thr180)	IMG-90315-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
P38 MAPK (Tyr182)	IMG-90316-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p38 MAPK (Tyr180/Tyr182)	IMG-679	P, AP	Rabbit	N/A	H, M, R	WB
p44/42 MAP Kinase (Tyr204)	IMG-90310-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P

## Merlin (Ser518) (IMG-90324-1)



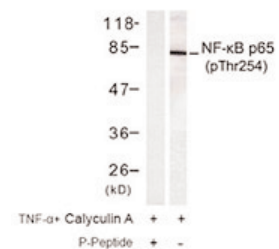
Western blot analysis of Merlin (Ser518) using IMG-90324-1 in HUVEC cells untreated or treated with IFN- $\alpha$  (100ng/ml, 15min).

## Neurofilament NF-H Phospho (IMG-5018A)



Immunofluorescence microscopy of mixed neuron/glia cultures of newborn rat brain (9 days in culture). Cultures were stained with anti-Phosphorylated Neurofilament NF-H (clone NAP4: green channel) and an irrelevant cytoskeletal antibody (red channel). The blue is DAPI, which stains DNA.

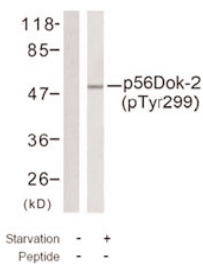
## NF-κB p65 (Thr254) (IMG-90127-1)



Western blot analysis of NF-κB p65 (Thr254) using IMG-90127-1 in TNF $\alpha$ +Calyculin treated HT29 cells in the presence and absence of immunizing peptide.

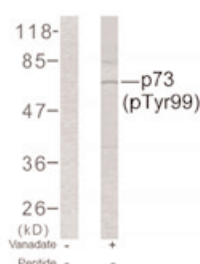
Description	Catalog No	Format	Host	Clone	Species	Application
p44/42 MAP Kinase (Thr202)	IMG-90309-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p53 (Ser15)	IMG-90202-1	P, AP	Rabbit	N/A	H	WB, IHC-P
p53 (Ser46)	IMG-90204-1	P, AP	Rabbit	N/A	H	WB
p53 (Ser315)	IMG-90205-1	P, AP	Rabbit	N/A	H	WB, IHC-P
p53 (Ser392)	IMG-680	P, AP	Rabbit	N/A	H, Mk, M	WB
p56Dok-2 (Tyr299)	IMG-90330-1	P, AP	Rabbit	N/A	H	WB, IHC-P
p62Dok (Tyr362)	IMG-90328-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p62Dok (Tyr398)	IMG-90329-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p70 S6 Kinase (Ser411)	IMG-90326-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p70 S6 Kinase (Ser424)	IMG-90334-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p70 S6 Kinase (Thr421)	IMG-90317-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p73 (Tyr99)	IMG-5355A	P, AP	Rabbit	N/A	H	WB
p73 (Tyr99)	IMG-90170-1	P, AP	Rabbit	N/A	H, M, R	WB
p90RSK (Thr348)	IMG-90208-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
p95/NBS1 (Ser343)	IMG-90169-1	P, AP	Rabbit	N/A	H	WB
PAK-1, 2, 3 (Thr402)	IMG-5387	P, AP	Rabbit	N/A	R	WB
PAK1 (Thr212)	IMG-90249-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
PAK1/PAK2/PAK3 (Thr423/Thr402/Thr421)	IMG-90258-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Parkin (Ser101)	IMG-5995	P, AP	Rabbit	N/A	Bo, H	WB
Parkin (Ser378)	IMG-5996	P, AP	Rabbit	N/A	H	WB
Paxillin (Ser178)	IMG-5785	P, AP	Rabbit	N/A	H, M, R	WB
Paxillin (Tyr118)	IMG-90199-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Paxillin (Tyr31)	IMG-90280-1	P, AP	Rabbit	N/A	H	WB
PKD1 (Ser241)	IMG-90122-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Phosphotyrosine	IMG-5787	P, AP	Rabbit	N/A	Multi	WB
PKC $\alpha$ Protein Kinase C, alpha (Ser657/Tyr658)	IMG-5786	P, AP	Rabbit	N/A	H, M, R	IP, WB
PKC $\alpha,\beta,\gamma$ (Protein Kinase C, alpha, beta, gamma)	IMG-5784	P	Mouse	M110	H, M, R	IP, WB
PKC $\beta$ (Thr642)	IMG-90260-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
PKC $\delta$ (Ser645)	IMG-90341-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
PKC $\zeta$ (Thr410)	IMG-90349-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
PKC $\theta$ (Ser676)	IMG-90342-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
PKC $\theta$ (Ser695)	IMG-90261-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
PKD/PKC $\mu$ (Ser738)	IMG-90188-1	P, AP	Rabbit	N/A	H, M, R	WB
PKD/PKC $\mu$ (Ser910)	IMG-90203-1	P, AP	Rabbit	N/A	H, M, R	WB
PKR (Thr446)	IMG-90332-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
PKR (Thr451)	IMG-90337-1	P, AP	Rabbit	N/A	H, M	IHC-P
PLC $\gamma$ 1 (Tyr783)	IMG-90207-1	P, AP	Rabbit	N/A	H, M, R	WB
PLC $\gamma$ 2 (Tyr753)	IMG-90263-1	P, AP	Rabbit	N/A	H, M, R	WB
Polo-Like Kinase 1 (PLK1)/STPK14 (Ser482/Ser486/Ser490)	IMG-5400	P, AP	Rabbit	N/A	Ax, Xe	WB
Polo-like Kinase 1 (Thr210)	IMG-5997	P, AP	Rabbit	N/A	Multi	WB
Potassium Channel, Voltage-Gated, Kv3.1 Subunit (Ser503)	IMG-5398	P, AP	Rabbit	N/A	R	IHC, WB
Progesterone Receptor (Ser190)	IMG-681	P	Mouse	1154	H	IHC, WB
Progesterone Receptor (Ser294)	IMG-682	P	Mouse	608	H	IHC, WB
PTEN (Ser370)	IMG-90174-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
PTEN (Ser380)	IMG-90126-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
PTEN (Ser380/Thr382/Thr383)	IMG-90168-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P

#### p56Dok-2 (Tyr299) (IMG-90330-1)



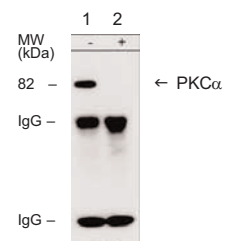
Western blot analysis of p56Dok-2 (Tyr299) using IMG-90330-1 in non-starved and serum starved K562 cells.

#### p73 (Tyr99) (IMG-90170-1)



Western blot analysis of p73 (Tyr99) using IMG-90170-1 in untreated or Vanadate treated K562 cells.

#### PKC $\alpha$ (Ser657/Tyr658) (IMG-5786)

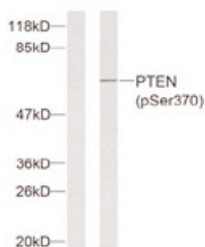


Western blot analysis of PKC $\alpha$  (Ser657/Tyr658) in neonatal rat brain lysate immunoprecipitates (control lane 1, alkaline phosphatase treated lane 2) using IMG-5786. Phosphorylated PKC $\alpha$  was not detected in the alkaline phosphatase treated lysate.

# Phosphospecific Antibodies

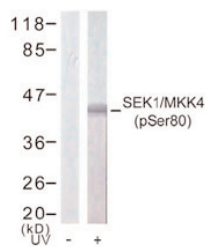
Description	Catalog No	Format	Host	Ab type	Species	Application
Pyk2 (Tyr402)	IMG-90286-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Rabphilin 3A (Ser234)	IMG-5875	P, AP	Rabbit	N/A	R	WB
Raf-1 (Ser259)	IMG-90123-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Raf-1 (Ser301)	IMG-5384	P, AP	Rabbit	N/A	R	WB
Raf-1 (Ser642)	IMG-5385	P, AP	Rabbit	N/A	R	WB
Rb (Ser780)	IMG-90231-1	P, AP	Rabbit	N/A	H.M.R	WB, IHC-P
Rb (Ser795)	IMG-90229-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Rb (Ser807)	IMG-90230-1	P, AP	Rabbit	N/A	H.M.R	WB, IHC-P
RelB (Ser552)	IMG-90318-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
S6 Ribosomal Protein (Ser235)	IMG-90301-1	P, AP	Rabbit	N/A	H, M, R	WB
SAPK/JNK (Thr183)	IMG-90313-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
SEK1/MKK4 (Ser80)	IMG-90265-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
SEK1/MKK4 (Thr261)	IMG-90264-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Shc1 (Tyr349)	IMG-90350-1	P, AP	Rabbit	N/A	H, M	WB
Shc1 (Tyr427)	IMG-90351-1	P, AP	Rabbit	N/A	H,(M,R)	WB, IHC-P
SHP-2 (Tyr542)	IMG-90352-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
SHP-2 (Tyr580)	IMG-90353-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Smad1 (Ser465)	IMG-90354-1	P, AP	Rabbit	N/A	H, M, R	WB
Smad2 (Ser467)	IMG-90355-1	P, AP	Rabbit	N/A	H, M, R	WB
SMC1 (Ser957)	IMG-90278-1	P, AP	Rabbit	N/A	H, M	WB, IHC-P
Src (Tyr418)	IMG-90201-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Src (Tyr529)	IMG-90248-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT1 (Tyr701)	IMG-90158-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT1(Ser727)	IMG-90256-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT3 (Ser727)	IMG-90160-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT3 (Tyr705)	IMG-90159-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT4 (Tyr693)	IMG-90161-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT5A (Ser780)	IMG-90163-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT5A (Tyr694)	IMG-90162-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
STAT6 (Thr645)	IMG-90165-1	P, AP	Rabbit	N/A	H	IHC-P
STAT6 (Tyr641)	IMG-408A	P	Mouse	177C322	H, M	IP, WB
STAT6 (Tyr641)	IMG-90164-1	P, AP	Rabbit	N/A	H	WB, IHC-P
Stathmin 1 (Ser15)	IMG-90303-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
Stathmin 1 (Ser24)	IMG-90294-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Stathmin 1 (Ser37)	IMG-90295-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Synapsin (Ser62/67)	IMG-5882	P, AP	Rabbit	N/A	R	WB
Synapsin (Ser549)	IMG-5881	P, AP	Rabbit	N/A	R	WB
Synapsin (Ser603)	IMG-683	P, AP	Rabbit	N/A	R	WB
Synapsin I (Ser9)	IMG-5046	P, AP	Rabbit	N/A	Multi	WB
Synaptotagmin (Ser309)	IMG-5048	P, AP	Rabbit	N/A	M, H, R	WB
Synaptotagmin (Thr202)	IMG-5047	P, AP	Rabbit	N/A	M, H, R	WB
Synuclein Pan	IMG-80464	P	Rabbit	N/A	H, R	IHC-P
TAO2 (Ser181)	IMG-5049	P, AP	Rabbit	N/A	Multi	WB
Tau (Ser214)	IMG-90212-1	P, AP	Rabbit	N/A	H, M, R	WB
Tau (Ser235)	IMG-90209-1	P, AP	Rabbit	N/A	H, M, R	WB
Tau (Ser262)	IMG-90214-1	P, AP	Rabbit	N/A	H, M, R	WB
Tau (Ser396)	IMG-90206-1	P, AP	Rabbit	N/A	H, M, R	WB
Tau (Ser404)	IMG-90215-1	P, AP	Rabbit	N/A	H, M, R	WB

**PTEN (Ser370) (IMG-90174-1)**



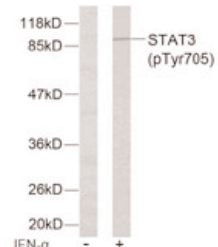
Western blot analysis of PTEN (Ser370) using IMG-90174-1 in HeLa cells in the presence and absence of immunizing peptide.

**SEK1/MKK4 (Ser80) (IMG-90265-1)**



Western blot analysis of SEK1/MKK4 (Ser80) using IMG-90265-1 in 293 cells untreated or treated with UV.

**STAT3 (Tyr705) (IMG-90159-1)**



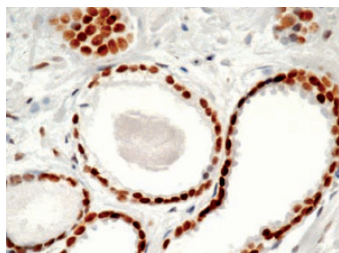
Western blot analysis of STAT3 (Tyr705) using IMG-90159-1 in IFN $\alpha$  untreated and treated HeLa cells.

Description	Catalog No	Format	Host	Clone	Species	Application
Tau (Thr181)	IMG-90210-1	P, AP	Rabbit	N/A	H, M, R	WB
Tau (Thr205)	IMG-90211-1	P, AP	Rabbit	N/A	H, M, R	WB
Tau (Thr231)	IMG-90213-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
TLR3/CD283 (Tyr759)	IMG-5348A	P, AP	Rabbit	N/A	H	WB
Tryptophan Hydroxylase (Ser260)	IMG-5386	P, AP	Rabbit	N/A	R	WB
Tryptophan Hydroxylase (Ser58)	IMG-5050	P, AP	Rabbit	N/A	Multi	WB
Tryptophan Hydroxylase 2 (Ser19)	IMG-6001	P, AP	Rabbit	N/A	Bo, M, R	WB
Tyrosine Hydroxylase (Ser19)	IMG-5051	P, AP	Rabbit	N/A	R	WB, IHC, IF/ICC
Tyrosine Hydroxylase (Ser31)	IMG-5052	P, AP	Rabbit	N/A	M, R	WB, IHC, IF/ICC
Tyrosine Hydroxylase (Ser40)	IMG-684	P, AP	Rabbit	N/A	R	WB, IF/ICC, IHC-Fr
VASP (Ser157)	IMG-90285-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
VASP (Ser238)	IMG-90251-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
Vav (Tyr174)	IMG-90238-1	P, AP	Rabbit	N/A	H, M, R	WB
VEGFR2 (Tyr951)	IMG-90196-1	P, AP	Rabbit	N/A	H, M, R	WB, IHC-P
VEGFR2 (Tyr1175)	IMG-90194-1	P, AP	Rabbit	N/A	H, M, R	IHC-P
VEGFR2 (Tyr1214)	IMG-90195-1	P, AP	Rabbit	N/A	H, M	IHC-P
Zap-70 (Tyr319)	IMG-90252-1	P, AP	Rabbit	N/A	H, M, R	WB
Zap-70 (Tyr493)	IMG-90253-1	P, AP	Rabbit	N/A	H, M, R	IHC-P

## PAN Antibodies

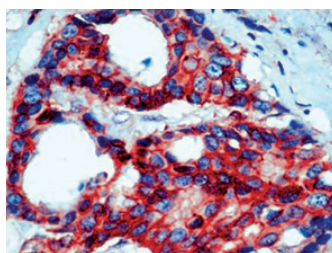
Description	Catalog No	Format	Host	Clone	Species	Application
14-3-3 Protein	IMG-5366	P, AP	Rabbit	N/A	Multi	WB
Acid phosphatase 1 (ACP1)	IMG-5841A	P	Rabbit	N/A	H	WB
AKT1	IMG-487	P	Rabbit	N/A	H	WB
AKT1	IMG-5411	P, AP	Rabbit	N/A	H, M, R	WB
Androgen Receptor	IMG-3238	P, AP	Goat	N/A	H	WB
Androgen Receptor	IMG-80164	P	Mouse	AR 441	H	WB, IHC
ATF2	IMG-311	P	Rabbit	N/A	H	WB
ATF2	IMG-3435	P, AP	Goat	N/A	H	WB
APP (668)	IMG-90274-1	P, AP	Rabbit	N/A	H, M, R	WB
$\beta$ -Catenin	IMG-5778	P, AP	Rabbit	N/A	H, M, R	WB, IP
$\beta$ -Catenin	IMG-80417	P	Rabbit	N/A	Multi	IHC
Caveolin-2	IMG-5015	P, AP	Rabbit	N/A	H	WB
Cofilin 1	IMG-5780	P, AP	Rabbit	N/A	H, M, R	WB
Connexin43	IMG-5372	P, AP	Rabbit	N/A	R	WB
Connexin43	IMG-80492	P	Rabbit	N/A	H, M, R	IHC
CREB	IMG-271A	P	Mouse	82B514.2	H	WB
	IMG-271B	P	Mouse	82B514.2	H	WB
c-Src (Tyr215)	IMG-5789	P, AP	Rabbit	N/A	H, M, R	WB
DARPP-32	IMG-5373	P, AP	Rabbit	N/A	R	WB
GABA A Receptor $\delta$ , C-Terminus	IMG-5862	P, AP	Rabbit	N/A	M, R	WB
GABA B Receptor 1	IMG-4041	P	Rabbit	N/A	H, M, R	WB

### Androgen Receptor (IMG-80164)



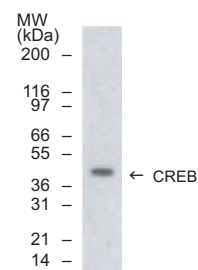
IHC analysis of Androgen Receptor in formalin-fixed paraffin embedded human prostate using IMG-80164.

### $\beta$ -Catenin (IMG-80417)



IHC analysis of Beta-Catenin in formalin-fixed paraffin embedded human breast carcinoma using IMG-80417.

### CREB (IMG-271A)

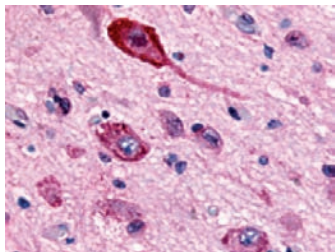


Western blot analysis of CREB in HeLa cell lysate using IMG-271A at 2ug/ml.

# PAN Antibodies

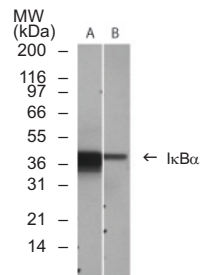
Description	Catalog No	Format	Host	Ab type	Species	Application
GABA B Receptor 1	IMG-71289	P, AP	Rabbit	N/A	H, M, R	IHC
GABA B Receptor 1	IMG-71290	P, AP	Rabbit	N/A	H, M, R	IHC
GABA B Receptor 2	IMG-4040	P	Rabbit	N/A	H, R	WB
Glycogen Synthase Kinase 3/FRAT2/GSK-3	IMG-3477	P, AP	Goat	N/A	H	WB
IκBα	IMG-127A	P	Mouse	6A920	H, M	WB, IP
	IMG-127B	P	Mouse	6A920	H, M	WB, ELISA
IκBα	IMG-5016	P	Rabbit	N/A	H	WB
IκBα	IMG-5270A	P	Rabbit	N/A	H	WB
Kidins220	IMG-4103	P	Rabbit	N/A	H	WB
MEK2/MAPK/ERK kinase 2	IMG-576	P	Rabbit	N/A	H, M, R	WB
Metabotropic Glutamate Receptor 1 (GluR1)	IMG-71390	P, AP	Rabbit	N/A	H	IHC
Metabotropic Glutamate Receptor 1 (GluR1)	IMG-71391	P, AP	Rabbit	N/A	H	IHC
Metabotropic Glutamate Receptor 1 (GluR1)	IMG-71392	P, AP	Rabbit	N/A	H	IHC
Neurofilament NF-H	IMG-4030	P	Rabbit	N/A	H	WB
Neurofilament NF-H	IMG-5017A	P	Rabbit	N/A	M, H, R, Ca	WB, IF/ICC
NMDA NR2b	IMG-686	P	Rabbit	N/A	H, M, R	WB, IHC
NMDA NR2B Subunit	IMG-5369	S	Rabbit	N/A	R	WB
N-WASP	IMG-5790	P, AP	Rabbit	N/A	H, M, R	WB
p38 MAPK	IMG-636	P	Rabbit	N/A	Multi	WB
p53	IMG-510	P	Mouse	G59-12	H, M, R	WB, IP, IHC
p53	IMG-583	P	Rabbit	N/A	H	WB
p53	IMG-80061	P	Mouse	DO7	H	WB, IHC, IP
p53	IMG-80146	P	Mouse	Bp53-12	H, M	IHC, FC
p53	IMG-80347	TCS	Rabbit	SP5	H	IHC
p53	IMG-80442	P	Rabbit	N/A	H, M, R	IHC
p73	IMG-246	A	Mouse	5B429	M, H	WB, IP, IF/ICC
p73	IMG-260	A	Mouse	5B789	H	WB
p73	IMG-5356A	A	Rabbit	N/A	H	WB, IP, IF/ICC

## GABA B Receptor 1 (IMG-71290)



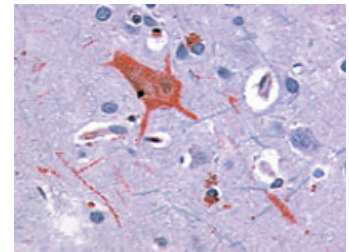
IHC analysis of Brain, Neurons and glia using IMG-71290 at 7 ug/ ml.

## IκBα (IMG-127A)



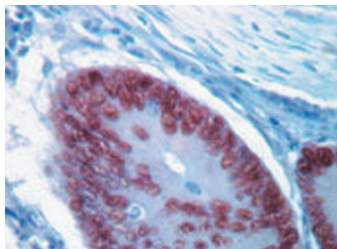
Western blot analysis of IκBα using IMG-127 at 2 ug/ml in (A) Daudi and (B) NIH 3T3 whole cell lysate.

## Metabotropic Glutamate Receptor 1 (IMG-71392)



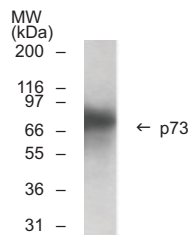
IHC analysis of Metabotropic Glutamate Receptor 1 in formalin-fixed paraffin embedded human brain using IMG-71392.

## p53 (IMG-80442)



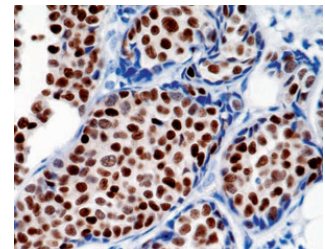
IHC analysis of p53 in formalin-fixed paraffin embedded human tonsil using IMG-80442.

## p73 (Alpha, Beta, Gamma, Delta Isoforms) (IMG-259A)



Western blot analysis of p73 using IMG-259A in p73 transfected cell lysate.

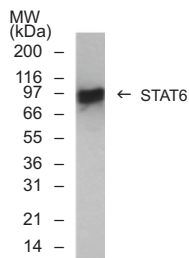
## Progesterone Receptor (IMG-80193)



IHC analysis of Progesterone Receptor in formalin-fixed paraffin embedded human breast carcinoma using IMG-80193.

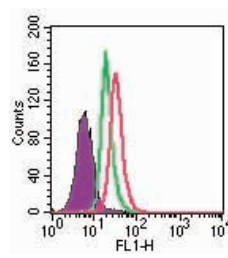
Description	Catalog No	Format	Host	Ab type	Species	Application
p73 (Alpha, Beta, Gamma, Delta Isoforms)	IMG-259A	A	Mouse	mAb	M, H	WB, IP, IF/ICC
p73 (deltaNp73)	IMG-313	P	Mouse	mAb	H, M, R	WB, ChIP, IHC-P
Paxillin	IMG-80284	A	Mouse	mAb	Multi	IHC
PKC ( $\alpha$ , $\beta$ , $\gamma$ )	IMG-5784	P	Mouse	mAb	H, M, R	WB, IP
Polo-Like Kinase 1 (PLK1)/STPK14	IMG-5297	S	Rabbit	N/A	Multi	WB
Progesterone Receptor	IMG-80076	TCS	Mouse	mAb	H	IHC
Progesterone Receptor	IMG-80193	P	Mouse	mAb	H	IHC
Progesterone Receptor	IMG-80479	P	Rabbit	mAb	H	IHC
Rab-3	IMG-5873	P, AP	Rabbit	N/A	R	WB
Rabphilin 3A	IMG-5874	P, AP	Rabbit	N/A	R	WB
Ribosomal S6 kinase	IMG-5878	P, AP	Rabbit	N/A	R	WB
SNAP25	IMG-5879	P, AP	Rabbit	N/A	R	WB
STAT6	IMG-462	P	Rabbit	N/A	H	WB
TLR3	IMG-5631	P	Rabbit	N/A	M, H	WB, IP, FC, IHC-P
TLR3/CD283	IMG-315A	P	Mouse	mAb	H	WB, IP, FC, IHC-P
TLR3/CD283	IMG-516	P	Rabbit	N/A	M	WB, IHC
Synapsin I	IMG-642	P	Mouse	mAb	Multi	WB, IF
Synapsin I	IMG-687	P	Rabbit	N/A	H, M, R	WB
Synapsin I	IMG-5370	S	Rabbit	N/A	H, M, R	WB
Synaptotagmin	IMG-5883	P, AP	Rabbit	N/A	R	WB
Synaptotagmin I	IMG-645	S	Rabbit	N/A	R, Xe	WB
Synaptophysin2	IMG-5884	P, AP	Rabbit	N/A	R	WB
Synuclein Pan	IMG-80464	P	Rabbit	N/A	H, R	IHC
Tryptophan Hydroxylase	IMG-5069	P, AP	Sheep	N/A	H, R	WB, IHC
Tyrosine Hydroxylase	IMG-688	P	Mouse	mAb	Ma	WB, IF, IHC
Tyrosine Hydroxylase	IMG-689	P	Rabbit	N/A	Ma	ELISA, IHF, IF, IP
Tyrosine Hydroxylase	IMG-5070	P, AP	Sheep	N/A	R	WB, IHC, IF
WASP/N-WASP	IMG-5791	P, AP	Rabbit	N/A	H, M, R	WB

#### STAT6 (IMG-462)



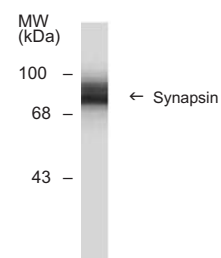
Western blot analysis of STAT6 in K562 cell lysate using IMG-462 at 1:1000 dilution.

#### TLR3/CD283 (IMG-315A)



Intracellular flow analysis of TLR3 in Ramos cells using 2 ug of IMG-315A. Shaded histogram represents Ramos cells without antibody; green represents isotype control; red represents anti-TLR3 antibody.

#### Synapsin I (IMG-687)



Western Blot of 10 ug of rat brain lysate showing specific immunolabeling of the ~78 kDa Synapsin I doublet.

Species	Format	Application
<b>Ax</b> ..... Axoloti	<b>A</b> ..... Ascites	<b>ChIPt</b> ..... Chromatin Immunoprecipitation
<b>Bo</b> ..... Bovine	<b>AP</b> ..... Peptide Affinity	<b>IHC-Fr</b> ..... Immunohistochemistry (Frozen)
<b>Ca</b> ..... Cat	<b>B</b> ..... Biotin	<b>IHC-P</b> ..... Immunohistochemistry (Paraffin)
<b>Ch</b> ..... Chicken	<b>P</b> ..... Purified	<b>IP</b> ..... Immunoprecipitation
<b>H</b> ..... Human	<b>S</b> ..... Sera	<b>WB</b> ..... Western Blot
<b>Ma</b> ..... Mammal		<b>IF/ICC</b> ..... Immunofluorescence/Immunocytochemistry
<b>M</b> ..... Mouse		
<b>Mk</b> ..... Monkey		
<b>Multi</b> ..... Multi Species		
<b>R</b> ..... Rat		
<b>Ra</b> ..... Rabbit		
<b>Xe</b> ..... Xenopus		

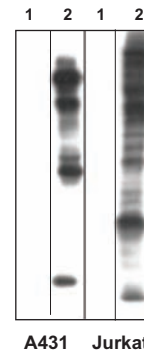
## Stimulated/Unstimulated Matched Lysate Sets

Matched lysates generated from unstimulated and stimulated cells are useful for studying protein phosphorylation and cell signaling. The basal level of phosphorylation in unstimulated cells is often very low, and may vary between both cell type and protein. Stimulating cells with various treatments including Calyculin A, EGF and Pervanadate dramatically increases phosphorylation of numerous proteins. IMGENEX offers a variety of cell lysate sets that can be used as controls for evaluating the effects of treatments on phosphorylation and other cell signaling pathways. Lysates are available individually or as matched sets containing two vials (100 µg each) of unstimulated (untreated) and stimulated (treated) cell lysate.

### Cell Lysates

Description	Cat No	Species
A431 Calyculin A Stimulated Lysate	40202S	H
A431 Calyculin A Unstimulated Control Lysate	40202C	H
A431 Calyculin A Stimulated/Unstimulated Lysate Set	40202M	H
A431 EGF Stimulated Lysate	40203S	H
A431 EGF Unstimulated Control Lysate	40203C	H
A431 EGF Stimulated/Unstimulated Lysate Set	40203M	H
A431 Pervanadate Stimulated Lysate	40204S	H
A431 Pervanadate Unstimulated Control Lysate	40204C	H
A431 Pervanadate Stimulated/Unstimulated Lysate Set	40204M	H
Jurkat Pervanadate Stimulated Lysate	40205S	H
Jurkat Pervanadate Unstimulated Control Lysate	40205C	H
Jurkat Pervanadate Stimulated/Unstimulated Lysate Set	40205M	H
K562 Pervanadate Stimulated Lysate	40206S	H
K562 Pervanadate Unstimulated Control Lysate	40206C	H
K-562 Pervanadate Stimulated/Unstimulated Lysate Set	40206M	H
Macrophage, M Calyculin A Stimulated Lysate	40207S	M
Macrophage, M Calyculin A Unstimulated Control Lysate	40207C	M
Macrophage, M Calyculin A Stimulated/Unstimulated Lysate Set	40207M	M
Macrophage, M Pervanadate Stimulated Lysate	40208S	M
Macrophage, M Pervanadate Unstimulated Control Lysate	40208C	M
MMacrophage, M Pervanadate Stimulated/Unstimulated Lysate Set	40208M	M

#### Phosphotyrosine (IMG-5787)



**Western blot analysis of A431 and Jurkat cells.** (20 ug/lane) unstimulated (Lane 1) or stimulated with 1 mM pervanadate for 30 min (Lane 2) and probed with IMG-5787, Phosphotyrosine.

#### AKT (IMG-5775)



**Western blot analysis of A431 cells.** (20 ug/lane) serum starved overnight (Lane 1) and Calyculin A (10nM) treated for 30 minutes (Lane 2) using IMG-5775, Phospho-AKT.

