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phospho-ERK1 (Thr202/Tyr204) + ERK2 (Thr183/Tyr185) Rabbit pAb

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Catalog # AP94746

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41 KDa
Physical State	Liquid
Immunogen	KLH conjugated Synthesised phosphopeptide derived from mouse ERK1/2 around the phosphorylation site of Thr202/Tyr204
Epitope Specificity	FL(p-T)E(p-Y)VA
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm, cytoskeleton, spindle. Nucleus. Cytoplasm, cytoskeleton, centrosome. Cytoplasm. Note=Associated with the spindle duringprometaphase and metaphase. PEA15-binding andphosphorylated DAPK1 promote its cytoplasmic retention.Phosphorylation at Ser-244 and Ser-246 as well asautophosphorylation at Thr-188 promote nuclear localization.
SIMILARITY	Belongs to the protein kinase superfamily. CMGCSer/Thr protein kinase family. MAP kinase subfamily. Contains 1 protein kinase domain.
SUBUNIT	Binds both upstream activators and downstream substratesin multimolecular complexes. Interacts with ADAM15, ARHGEF2, ARRB2,DAPK1 (via death domain), HSF4, IER3, IPO7, DUSP6, NISCH, SGK1, andisoform 1 of NEK2. Interacts (via phosphorylated form) with TPR(via C-terminus region and phosphorylated form); the interactionrequires dimerization of MAPK1/ERK2 and increases following EGFstimulation. Interacts (phosphorylated form) withCAV2 ('Tyr-19'-phosphorylated form); the interaction, promoted byinsulin, leads to nuclear location and MAPK1 activation. Interacts with DCC. Interacts withMORG1, PEA15 and MKNK2. MKNK2 isoform 1 binding prevents fromdephosphorylation and inactivation. The phosphorylated forminteracts with PML.
Post-translational modifications	Dually phosphorylated on Thr-183 and Tyr-185, which activatesthe enzyme. Ligand-activated ALK induces tyrosine phosphorylation. Dephosphorylated by PTPRJ at Tyr-185. Phosphorylated upon FLT3 and KIT signaling.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a member of the MAPkinase family. MAP kinases, also known as extracellularsignal-regulated kinases (ERKs), act in a signaling cascade thatregulates various cellular processes such as proliferation,differentiation, and cell cycle progression in response to avariety of extracellular signals. This kinase is activated byupstream kinases, resulting

in its translocation to the nucleuswhere it phosphorylates nuclear targets. Alternatively splicedtranscript variants encoding different protein isoforms have beendescribed. [provided by RefSeq, Jul 2008].

Additional Information

Target/Specificity	Widely expressed.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 g /test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Background

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Images

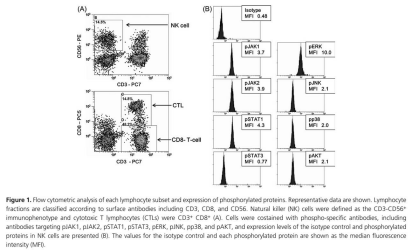


Figure 1. Flow cytometric analysis of each lymphocyte subset and expression of phosphorylated proteins. Representative data are shown. Lymphocyte fractions are classified according to surface antibodies including CD3, CD8, and CD56. Natural killer (NK) cells were defined as the CD3-CD56+ immunophenotype and cytotoxic T lymphocytes (CTLs) were CD3+ CD8+ (A). Cells were costained with phospho-specific antibodies, including antibodies targeting pAKT, pJAK2, pSTAT1, pSTAT3, pERK, pJNK, pp38, and pAKT, and expression levels of the isotype control and phosphorylated proteins in NK cells are presented (B). The values for the isotype control and each phosphorylated protein are shown as the median fluorescence intensity (MFI).

cells: human

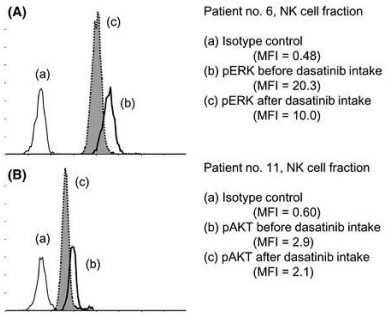
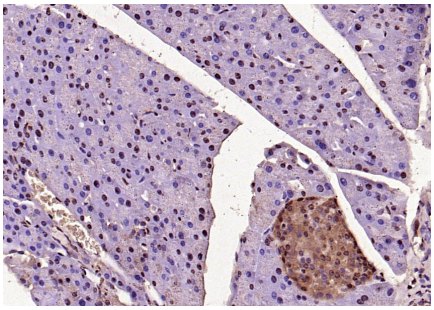
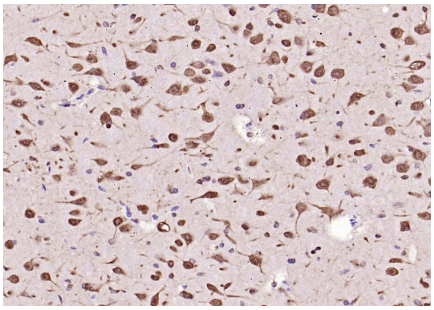


Figure 6. Representative histograms showing expression changes of pERK (A) and pAKT (B) in the natural killer (NK) cell fraction.

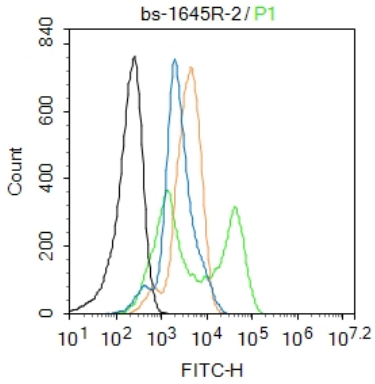
From 《Cancer Medicine》(2016.6): PublitionDirect effect of dasatinib on signal transduction pathways associated with a rapid mobilization of cytotoxic lymphocytes , IF:2.5 Author: Noriyoshi Iriyama, Yoshihiro Hatta & Masami Takei Division of Hematology and Rheumatology, Department of Medicine, Nihon University School of Medicine, Tokyo, Japan



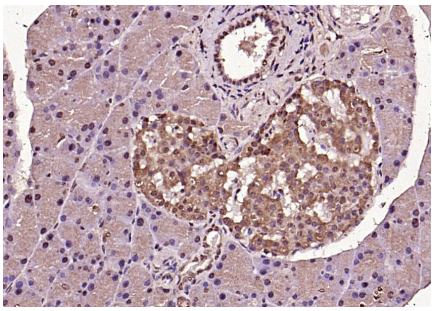
Paraformaldehyde-fixed, paraffin embedded (mouse pancreas); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-ERK1 (Thr202Tyr204) + ERK2 (Thr183Tyr185)) Polyclonal Antibody, Unconjugated (AP94746) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-ERK1 (Thr202Tyr204) + ERK2 (Thr183Tyr185)) Polyclonal Antibody, Unconjugated (AP94746) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Blank control: MCF7. Primary Antibody (green line): Rabbit Anti-Phospho-ERK1 (Thr202/Tyr204) + ERK2 (Thr183/Tyr185) antibody (AP94746) Dilution: 2 µg /10^6 cells; Isotype Control Antibody (orange line): Rabbit IgG . Secondary Antibody : Goat anti-rabbit IgG-FITC Dilution: 1 µg /test. Protocol The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



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