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phospho-c-Fos (Thr232) Rabbit pAb

Catalog # AP96989

Product Information

Application	WB
Primary Accession	P01101
Other Accession	P01101
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40838
Physical State	Liquid
Immunogen	KLH conjugated Synthesised phosphopeptide derived from mouse c-Fos around the phosphorylation site of Thr232
Epitope Specificity	AS(p-T)PE
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the bZIP family. Fos subfamily. Contains 1 bZIP domain
SUBUNIT	Heterodimer; with JUN (By similarity). Interacts withMAFB. Component of the SMAD3/SMAD4/JUN/FOS complexrequired for syngernistic TGF-beta-mediated transcription at theAP1 promoter site. Interacts with SMAD3; the interaction is weakeven on TGF-beta activation. Interacts with MAFB. Interacts withDSIPI; this interaction inhibits the binding of active AP1 to itstarget DNA.
Post-translational modifications	Phosphorylated in the C-terminal upon stimulation by nerve growth factor (NGF) and epidermal growth factor (EGF). Phosphorylated, in vitro, by MAPK and RSK1. Phosphorylation on both Ser-362 and Ser-374 by MAPK1/2 and RSK1/2 leads to protein stabilization with phosphorylation on Ser-374 being the major site for protein stabilization on NGF stimulation. Phosphorylation on Ser-362 and Ser-374 primes further phosphorylations on Thr-325 and Thr-331 through promoting docking of MAPK to the DEF domain. Phosphorylation on Thr-232, induced by HA-RAS, activates the transcriptional activity and antagonizes sumoylation. Phosphorylation on Ser-362 by RSK2 in osteoblasts contributes to osteoblast transformation. Constitutively sumoylated by SUMO1, SUMO2 and SUMO3. Desumoylated by SENP2. Sumoylation requires heterodimerization with JUN and is enhanced by mitogen stimulation. Sumoylation inhibits the AP-1 transcriptional activity and is, itself, inhibited by Ras-activated phosphorylation on Thr-232.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The Fos gene family consists of 4 members: FOS, FOSB, FOSL1, and FOSL2. These genes encode leucine zipper proteins that can dimerize with proteins of the JUN family, thereby forming the transcription factor complex AP-1. As such, the FOS proteins have been implicated as regulators of cell proliferation, differentiation, and transformation. In some cases, expression of the FOS gene has also been associated with apoptotic cell death. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	14281
Other Names	AP-1; C-FOS; p55; D12Rfj1; cFos; FOS_HUMAN; FOS; Cellular oncogene fos; Fos proto-oncogene, AP-1 transcription factor subunit; G0/G1 switch regulatory protein 7; Proto-oncogene c-Fos; Transcription factor AP-1 subunit c-Fos; G0S7; FOS_MOUSE; FBJ osteosarcoma oncogene; FOS_RAT; v-fos FBJ murine osteosarcoma viral oncogene homolog; FBJ murine osteosarcoma viral oncogene homolog; FOS | c-Fos (phospho-T232); p-c-Fos; phospho-c-Fos; p-FOS; FOS | c-Fos (phospho-Thr232)
Dilution	WB=1:500-2000
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.

Protein Information

Name	Fos
Function	Nuclear phosphoprotein which forms a tight but non-covalently linked complex with the JUN/AP-1 transcription factor. On TGF-beta activation, forms a multimeric SMAD3/SMAD4/JUN/FOS complex, at the AP1/SMAD-binding site to regulate TGF-beta-mediated signaling (By similarity). Has a critical function in regulating the development of cells destined to form and maintain the skeleton. It is thought to have an important role in signal transduction, cell proliferation and differentiation. In growing cells, activates phospholipid synthesis, possibly by activating CDS1 and PI4K2A. This activity requires Tyr-dephosphorylation and association with the endoplasmic reticulum.
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00978}. Endoplasmic reticulum. Cytoplasm, cytosol Note=In quiescent cells, present in very small amounts in the cytosol Following induction of cell growth, first localizes to the endoplasmic reticulum and only later to the nucleus. Localization at the endoplasmic reticulum requires dephosphorylation at Tyr-10 and Tyr-30 (By similarity).

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