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ROS Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7676a

Product Information

Application	WB, IHC-P, E
Primary Accession	P08922
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	263915
Antigen Region	23-56

Additional Information

Gene ID	6098
Other Names	Proto-oncogene tyrosine-protein kinase ROS, Proto-oncogene c-Ros, Proto-oncogene c-Ros-1, Receptor tyrosine kinase c-ros oncogene 1, c-Ros receptor tyrosine kinase, ROS1, MCF3, ROS
Target/Specificity	This ROS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 23-56 amino acids from the N-terminal region of human ROS.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ROS Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ROS1
Synonyms	MCF3, ROS
Function	Receptor tyrosine kinase (RTK) that plays a role in epithelial cell differentiation and regionalization of the proximal epididymal epithelium.

NELL2 is an endogenous ligand for ROS1. Upon endogenous stimulation by NELL2, ROS1 activates the intracellular signaling pathway and triggers epididymal epithelial differentiation and subsequent sperm maturation (By similarity). May activate several downstream signaling pathways related to cell differentiation, proliferation, growth and survival including the PI3 kinase-mTOR signaling pathway. Mediates the phosphorylation of PTPN11, an activator of this pathway. May also phosphorylate and activate the transcription factor STAT3 to control anchorage-independent cell growth. Mediates the phosphorylation and the activation of VAV3, a guanine nucleotide exchange factor regulating cell morphology. May activate other downstream signaling proteins including AKT1, MAPK1, MAPK3, IRS1 and PLCG2.

Cellular Location Cell membrane; Single-pass type I membrane protein

Tissue Location Expressed in brain. Expression is increased in primary gliomas.

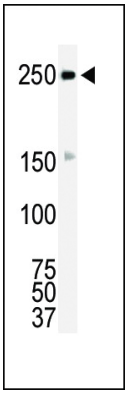
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The tyrosine kinase (TK) group is mainly involved in the regulation of cell-cell interactions such as differentiation, adhesion, motility and death. There are currently about 90 TK genes sequenced, 58 are of receptor protein TK (e.g. EGFR, EPH, FGFR, PDGFR, TRK, and VEGFR families), and 32 of cytosolic TK (e.g. ABL, FAK, JAK, and SRC families).

References

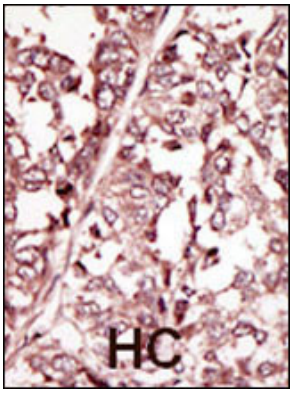
Birchmeier, C., et al., Proc. Natl. Acad. Sci. U.S.A. 87(12):4799-4803 (1990).
Matsushime, H., et al., Mol. Cell. Biol. 6(8):3000-3004 (1986).
Birchmeier, C., et al., Mol. Cell. Biol. 6(9):3109-3116 (1986).

Images



Western blot analysis of anti-ROS Pab (Cat. #ap7676a) in HL-60 cell lysate. ROS (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical



relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.