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PA2G4 Antibody (Center R243)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2848d

Product Information

Application	IHC-P, FC, IF, WB, E
Primary Accession	Q9UQ80
Other Accession	P50580
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17484
Calculated MW	43787
Antigen Region	228-255

Additional Information

Gene ID	5036
Other Names	Proliferation-associated protein 2G4, Cell cycle protein p38-2G4 homolog, hG4-1, ErbB3-binding protein 1, PA2G4, EBP1
Target/Specificity	This PA2G4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 228-255 amino acids from the Central region of human PA2G4.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 WB~~1:1000 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	PA2G4 Antibody (Center R243) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PA2G4
Synonyms	EBP1

Function	May play a role in a ERBB3-regulated signal transduction pathway. Seems be involved in growth regulation. Acts a corepressor of the androgen receptor (AR) and is regulated by the ERBB3 ligand neuregulin-1/heregulin (HRG). Inhibits transcription of some E2F1- regulated promoters, probably by recruiting histone acetylase (HAT) activity. Binds RNA. Associates with 28S, 18S and 5.8S mature rRNAs, several rRNA precursors and probably U3 small nucleolar RNA. May be involved in regulation of intermediate and late steps of rRNA processing. May be involved in ribosome assembly. Mediates cap-independent translation of specific viral IRESs (internal ribosomal entry site) (By similarity). Regulates cell proliferation, differentiation, and survival. Isoform 1 suppresses apoptosis whereas isoform 2 promotes cell differentiation (By similarity).
Cellular Location	[Isoform 1]: Cytoplasm. Nucleus, nucleolus Note=Translocates to the nucleus upon treatment with HRG Phosphorylation at Ser-361 by PKC/PRKCD regulates its nucleolar localization.
Tissue Location	Isoform 2 is undetectable whereas isoform 1 is strongly expressed in cancer cells (at protein level). Isoform 1 and isoform 2 are widely expressed, including heart, brain, lung, pancreas, skeletal muscle, kidney, placenta and liver

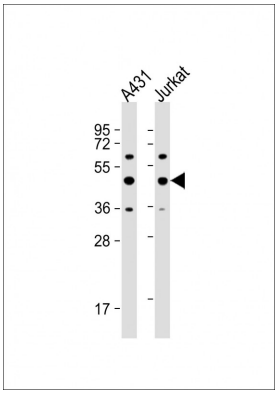
Background

PA2G4 is an RNA-binding protein that is involved in growth regulation. This protein is present in pre-ribosomal ribonucleoprotein complexes and may be involved in ribosome assembly and the regulation of intermediate and late steps of rRNA processing. The protein can interact with the cytoplasmic domain of the ErbB3 receptor and may contribute to transducing growth regulatory signals. It is also a transcriptional co-repressor of androgen receptor-regulated genes and other cell cycle regulatory genes through its interactions with histone deacetylases. It has been implicated in growth inhibition and the induction of differentiation of human cancer cells.

References

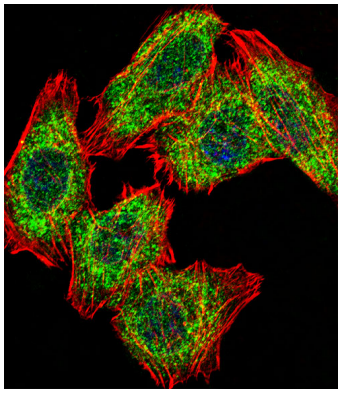
Zhang,Y., Mol. Cancer Ther. 7 (10), 3176-3186 (2008)
Zhang,Y., Cancer Lett. 265 (2), 298-306 (2008)
Okada,M., J. Biol. Chem. 282 (50), 36744-36754 (2007)

Images

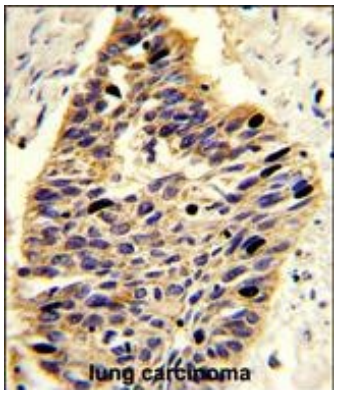


All lanes : Anti-PA2G4 Antibody (Center R243) at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 44 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

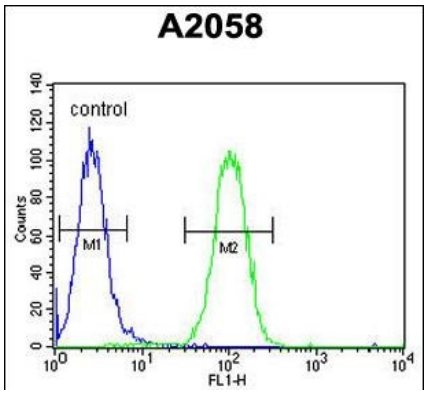
Fluorescent confocal image of U251 cell stained with PA2G4 Antibody (Center R243)(Cat#AP2848d).U251 cells were fixed with 4% PFA (20 min), permeabilized with



Triton X-100 (0.1%, 10 min), then incubated with PA2G4 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).PA2G4 immunoreactivity is localized to Cytoplasm significantly and Nucleus weakly.



Formalin-fixed and paraffin-embedded human lung carcinoma reacted with PA2G4 Antibody (Center R243), 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.



PA2G4 Antibody (Center R243) (Cat. #AP2848d) flow cytometric analysis of A2058 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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