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GLTSCR2 Rabbit pAb

Catalog # AP96808

Product Information

Application	WB
Primary Accession	Q9NZM5
Other Accession	Q9NZM5
Reactivity	Mouse
Predicted	Rat, Pig, Human, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	54389
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GLTSCR2/PICT1
Epitope Specificity	401-478/478
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 GLTSCR2 family.
SUBUNIT	Interacts with HSV-1 early proteins ICP22 and ICP0.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The tumor suppressor PTEN plays an essential role in regulating signaling pathways involved in cell growth and apoptosis and is inactivated in a wide variety of tumors. Protein interacting with PTEN carboxyl terminus 1 (PICT-1), also designated p60 or Glioma tumor suppressor candidate region gene 2 protein, binds to the C-terminus of PTEN and regulates its turnover. Five Ser/Thr residues within the C-terminal segment of PTEN, including Ser-380, are phosphorylated upon binding of PTEN to PICT-1 and may contribute to the stabilization of PTEN. PICT-1 is localized to the nucleus and/or nucleolus and is highly expressed in pancreas and heart, but can also be detected in liver, skeletal muscle, placenta and kidney. PICT-1 also interacts with herpes simplex virus 1 regulatory proteins ICP22 and ICP0. The tumor suppressor GLTSCR2 gene, which encodes PICT-1, is located in a 150-kb minimal common deletion region for human gliomas, especially oligodendrogliomas, and maps to human chromosome 19q13.3.

Additional Information

Gene ID	29997
Other Names	GLTSCR2; PICT-1; PICT1; NOP53_HUMAN; NOP53; Glioma tumor suppressor candidate region gene 2 protein; Protein interacting with carboxyl terminus 1 (PICT-1); p60; GLT; NOP53 ribosome biogenesis factor; glioma tumor suppressor candidate region gene 2
	WB=1:500-2000

Dilution	
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	NOP53 (HGNC:4333)
Function	Nucleolar protein which is involved in the integration of the 5S RNP into the ribosomal large subunit during ribosome biogenesis (PubMed:24120868). In ribosome biogenesis, may also play a role in rRNA transcription (PubMed:27729611). Also functions as a nucleolar sensor that regulates the activation of p53/TP53 in response to ribosome biogenesis perturbation, DNA damage and other stress conditions (PubMed:21741933, PubMed:24120868, PubMed:27829214). DNA damage or perturbation of ribosome biogenesis disrupt the interaction between NOP53 and RPL11 allowing RPL11 transport to the nucleoplasm where it can inhibit MDM2 and allow p53/TP53 activation (PubMed:24120868, PubMed:27829214). It may also positively regulate the function of p53/TP53 in cell cycle arrest and apoptosis through direct interaction, preventing its MDM2-dependent ubiquitin-mediated proteasomal degradation (PubMed:22522597). Originally identified as a tumor suppressor, it may also play a role in cell proliferation and apoptosis by positively regulating the stability of PTEN, thereby antagonizing the PI3K-AKT/PKB signaling pathway (PubMed:15355975, PubMed:16971513, PubMed:27729611). May also inhibit cell proliferation and increase apoptosis through its interaction with NF2 (PubMed:21167305). May negatively regulate NPM1 by regulating its nucleoplasmic localization, oligomerization and ubiquitin-mediated proteasomal degradation (PubMed:25818168). Thereby, may prevent NPM1 interaction with MYC and negatively regulate transcription mediated by the MYC-NPM1 complex (PubMed:25956029). May also regulate cellular aerobic respiration (PubMed:24556985). In the cellular response to viral infection, may play a role in the attenuation of interferon-beta through the inhibition of RIGI (PubMed:27824081).
Cellular Location	Nucleus, nucleolus. Nucleus, nucleoplasm. Note=In the nucleolus may be more specifically localized to the fibrillar center (PubMed:27729611). Mainly nucleolar it relocalizes to the nucleoplasm under specific conditions including ribosomal stress enabling it to interact and regulate nucleoplasmic proteins like p53/TP53 (PubMed:22522597, PubMed:24923447, PubMed:26903295, PubMed:27323397) Also detected in the cytosol (PubMed:24923447, PubMed:27824081)
Tissue Location	Expressed at high levels in heart and pancreas, moderate levels in placenta, liver, skeletal muscle, and kidney, and low levels in brain and lung.

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