For Research Use Only

NIPSNAP1 Polyclonal antibody

Catalog Number:33020-1-AP

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Basic Information

Catalog Number:
33020-1-AP

Concentration:
350 μg/ml

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG36474

GenBank Accession Number:
NM_003634.3

GeneID (NCBI):
8508

UNIPROT ID:
Q9BPW8

Full Name:
nipsnap homolog 1 (C. elegans)

Calculated MW:
33kDa，284aa

Observed MW:
30 kDa

Purification Method:
Antigen affinity Purification

Recommended Dilutions:
WB 1:5000-1:50000

Applications

Tested Applications:
WB, ELISA

Species Specificity:
human, mouse, rat

Positive Controls:

WB : rat liver tissue, HepG2 cells, HuH-7 cells, mouse brain tissue, mouse liver tissue

Background Information

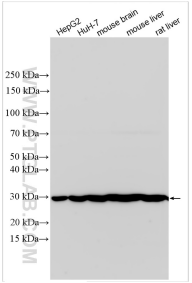
NIPSNAP1 has been shown to play a role in regulating synaptic activity in learning and memory but nonetheless, along with the brain, NIPSNAP1 is highly abundant in other organs such as the liver, kidney, and adrenals but its expression is less evident in other tissues such as skeletal muscle. Functional investigations revealed the knockdown of NIPSNAP1 in cancer cells induced cell cycle arrest and inhibited proliferation with the underlying phenotype resulting from senescence. Further analyses revealed that NIPSNAP1 engages in two separate binding interactions that prevent cellular senescence. First, NIPSNAP1 engages with the E3 ubiquitin ligase FBXL14 which otherwise serves to target c-Myc for proteasomal degradation. And moreover, this was shown to be part of a regulatory feedback loop since NIPSNAP1 is subject to transcriptional repression by c-Myc. The second interaction involves NIPSNAP1 binding to superoxide dismutase 2 (SOD2) which enhances its association with SIRT3, thereby deacetylating SOD2 and increasing its activity, in turn, alleviating elevated ROS levels. Consequently, silencing NIPSNAP1 expression contributes to P27-mediated senescence via both decreasing the levels of c-Myc together with increasing ROS levels. Together these findings reveal an important role for NIPSNAP1 as a negative regulator of cancer cell senescence, which functions to sustain the viability of cancer cells under growth factor deprivation stress (PMID: 37340421).

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 33020-1-AP (NIPSNAP1 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours.