10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GPS2 Antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI16053

Product Information

Application	WB
Primary Accession	Q13227
Other Accession	XP_005256674
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36689

Additional Information

Gene ID	2874
Alias Symbol	GPS2,
Other Names	G protein pathway suppressor 2, GPS-2, GPS2
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 &mu, l of distilled water. Final Anti-GPS2 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at -20°C. Avoid repeat freeze-thaw cycles.
Precautions	GPS2 Antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GPS2 (HGNC:4550)
Function	Key regulator of inflammation, lipid metabolism and mitochondrion homeostasis that acts by inhibiting the activity of the ubiquitin-conjugating enzyme UBE2N/Ubc13, thereby inhibiting 'Lys-63'- linked ubiquitination (By similarity). In the nucleus, can both acts as a corepressor and coactivator of transcription, depending on the context (PubMed:24943844). Acts as a transcription coactivator in adipocytes by promoting the recruitment of PPARG to promoters: acts by inhibiting the activity of the ubiquitin-conjugating enzyme UBE2N/Ubc13, leading to stabilization of KDM4A and subsequent histone H3 'Lys-9' (H3K9) demethylation (By similarity). Promotes cholesterol efflux by acting as a transcription coactivator (PubMed:19481530). Acts as a regulator of B-cell development by inhibiting UBE2N/Ubc13, thereby restricting the activation of Toll-like receptors (TLRs)

	and B-cell antigen receptors (BCRs) signaling pathways (By similarity). Acts as a key mediator of mitochondrial stress response: in response to mitochondrial depolarization, relocates from the mitochondria to the nucleus following desumoylation and specifically promotes expression of nuclear-encoded mitochondrial genes (PubMed:29499132). Promotes transcription of nuclear-encoded mitochondrial genes by inhibiting UBE2N/Ubc13 (PubMed:29499132). Can also act as a corepressor as part of the N-Cor repressor complex by repressing active PPARG (PubMed:19858209, PubMed:24943844). Plays an anti-inflammatory role in macrophages and is required for insulin sensitivity by acting as a corepressor (By similarity). Plays an anti-inflammatory role during the hepatic acute phase response by interacting with sumoylated NR1H2 and NR5A2 proteins, thereby preventing N-Cor corepressor complex dissociation (PubMed:20159957). In the cytosol, also plays a non- transcriptional role by regulating insulin signaling and pro-inflammatory pathways (By similarity). In the cytoplasm, acts as a negative regulator of inflammation by inhibiting the pro-inflammatory TNF-alpha pathway; acts by repressing UBE2N/Ubc13 activity (By similarity). In the cytoplasm of adipocytes, restricts the activation of insulin signaling via inhibition of UBE2N/Ubc13-mediated ubiquitination of AKT (By similarity). Able to suppress G-protein- and mitogen-activated protein kinase-mediated signal transduction (PubMed:8943324). Acts as a tumor-suppressor in liposarcoma (PubMed:27460081).
Cellular Location	Nucleus Mitochondrion. Cytoplasm, cytosol. Note=Sumoylation regulates the subcellular location (PubMed:24943844). Relocates from the mitochondria to the nucleus following desumoylation, leading to mediate mitochondrial stress response (By similarity) {ECO:0000250|UniProtKB:Q921N8, ECO:0000269|PubMed:24943844}
Tissue Location	Widely expressed..

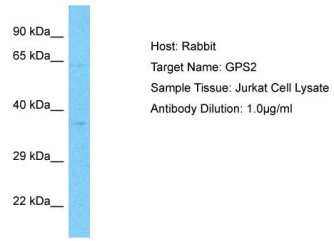
Background

Suppresses G-protein- and mitogen-activated protein kinase-mediated signal transduction.

References

Spain B.H.,et al.Mol. Cell. Biol. 16:6698-6706(1996).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Bechtel S.,et al.BMC Genomics 8:399-399(2007).

Images



Host: Rabbit
Target Name: GPS2
Sample Tissue: Jurkat Whole cell lysate
s
Antibody Dilution: 1.0µg/ml