

Recombinant Mouse Gps2 Protein, Myc/DDK-tagged

Cat. No. Gps2-3297M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length G protein pathway suppressor 2 (Gps2), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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. In the nucleus, can both acts as a corepressor and coactivator of transcription, depending on the context. 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. Promotes cholesterol efflux by acting as a transcription coactivator. 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. 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. Promotes transcription of nuclear-encoded mitochondrial genes by inhibiting UBE2N/Ubc13. Can also act as a corepressor as part of the N-Cor repressor complex by repressing active PPARG. Plays an anti-inflammatory role in macrophages and is required for insulin sensitivity

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by acting as a corepressor. 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. In the cytosol, also plays a non-transcriptional role by regulating insulin signaling and pro-inflammatory pathways. In the cytoplasm, acts as a negative regulator of inflammation by inhibiting the proinflammatory TNF-alpha pathway; acts by repressing UBE2N/Ubc13 activity. In the cytoplasm of adipocytes, restricts the activation of insulin signaling via inhibition of UBE2N/Ubc13-mediated ubiquitination of AKT. Able to suppress G-protein- and mitogen-activated protein kinase-mediated signal transduction.

Molecular Mass	36.7 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Gps2 G protein pathway suppressor 2 [Mus musculus (house mouse)]
Official Symbol	Gps2
Synonyms	GPS2; G protein pathway suppressor 2; AI505953

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Gene ID	56310
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mRNA Refseq	NM_019726
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Protein Refseq	NP_062700
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UniProt ID	Q921N8
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