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Goat Anti-APPL1 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1091a

Specification

Goat Anti-APPL1 Antibody - Product Information

Application	**WB, E**
Primary Accession	Q9UKG1
Other Accession	NP_036228, 26060, 72993 (mouse)
Predicted	**Human, Mouse, Rat, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**79663**

Goat Anti-APPL1 Antibody - Additional Information

Gene ID 26060

Other Names
DCC-interacting protein 13-alpha, Dip13-alpha, Adapter protein containing PH domain, PTB domain and leucine zipper motif 1, APPL1

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-APPL1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-APPL1 Antibody - Protein Information

Name APPL1 (HGNC:24035)

Function
Multifunctional adapter protein that binds to various membrane receptors, nuclear factors and signaling proteins to regulate many processes, such as cell proliferation, immune response,

endosomal trafficking and cell metabolism (PubMed:10490823, PubMed:15016378, PubMed:19661063, PubMed:26073777, PubMed:26583432). Regulates signaling pathway leading to cell proliferation through interaction with RAB5A and subunits of the NuRD/MeCP1 complex (PubMed:15016378). Functions as a positive regulator of innate immune response via activation of AKT1 signaling pathway by forming a complex with APPL1 and PIK3R1 (By similarity). Inhibits Fc-gamma receptor-mediated phagocytosis through PI3K/Akt signaling in macrophages (By similarity). Regulates TLR4 signaling in activated macrophages (By similarity). Involved in trafficking of the TGFBR1 from the endosomes to the nucleus via microtubules in a TRAF6-dependent manner (PubMed:26583432). Plays a role in cell metabolism by regulating adiponecting and insulin signaling pathways (PubMed:19661063, PubMed:24879834, PubMed:26073777). Required for fibroblast migration through HGF cell signaling (By similarity). Positive regulator of beta-catenin/TCF-dependent transcription through direct interaction with RUVBL2/reptin resulting in the relief of RUVBL2-mediated repression of beta-catenin/TCF target genes by modulating the interactions within the beta-catenin-reptin-HDAC complex (PubMed:19433865).

Cellular Location
Early endosome membrane; Peripheral membrane protein. Nucleus. Cytoplasm. Endosome. Cell projection, ruffle {ECO:0000250|UniProtKB:Q8K3H0}. Cytoplasmic vesicle, phagosome {ECO:0000250|UniProtKB:Q8K3H0}. Note=Early endosomal membrane-bound and nuclear. Translocated into the nucleus upon release from endosomal membranes following internalization of EGF

Tissue Location
High levels in heart, ovary, pancreas and skeletal muscle.

Goat Anti-APPL1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-APPL1 Antibody - Images

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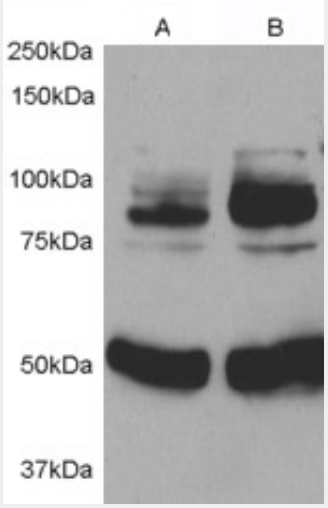

AF1091a (0.5 µg/ml) staining of 1) Rat Aortic Smooth Muscle cell lysate 2) after infection with Human APPL1 adenovirus for 48hrs. Detected by chemiluminescence. Data kindly provided by Dr. L. Jia, Ann Arbor, USA.

Goat Anti-APPL1 Antibody - Background

The protein encoded by this gene has been shown to be involved in the regulation of cell proliferation, and in the crosstalk between the adiponectin signalling and insulin signalling pathways. The encoded protein binds many other proteins, including RAB5A, DCC, AKT2, PIK3CA, adiponectin receptors, and proteins of the NuRD/MeCP1 complex. This protein is found associated with endosomal membranes, but can be released by EGF and translocated to the nucleus.

Goat Anti-APPL1 Antibody - References

Rab5a overexpression promoting ovarian cancer cell proliferation may be associated with APPL1-related epidermal growth factor signaling pathway. Zhao Z, et al. Cancer Sci, 2010 Jun. PMID 20412119.
Identification of phosphorylation sites within the signaling adaptor APPL1 by mass spectrometry. Gant-Branum RL, et al. J Proteome Res, 2010 Mar 5. PMID 20095645.
Functional characterization of the interactions between endosomal adaptor protein APPL1 and the NuRD co-repressor complex. Banach-Orlowska M, et al. Biochem J, 2009 Oct 12. PMID 19686092.
Adiponectin activates AMP-activated protein kinase in muscle cells via APPL1/LKB1-dependent and phospholipase C/Ca2+/Ca2+/calmodulin-dependent protein kinase kinase-dependent pathways. Zhou L, et al. J Biol Chem, 2009 Aug 14. PMID 19520843.
Endosomal adaptor proteins APPL1 and APPL2 are novel activators of beta-catenin/TCF-mediated transcription. Rashid S, et al. J Biol Chem, 2009 Jul 3. PMID 19433865.