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

IGF1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14099b

Product Information

Application	WB, IF, FC, IHC-P, E
Primary Accession	P05019
Other Accession	P01343, NP_000609.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33711
Calculated MW	21841
Antigen Region	115-144

Additional Information

Gene ID	3479
Other Names	IGF1; IBP1; Insulin-like growth factor I; Mechano growth factor; Somatomedin-C
Target/Specificity	This IGF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 115-144 amino acids from the C-terminal region of human IGF1.
Dilution	WB~~1:1000 IF~~1:10~50 FC~~1:10~50 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IGF1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IGF1 (HGNC:5464)
Function	The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting

activity. May be a physiological regulator of [1-14C]- 2-deoxy-D-glucose (2DG) transport and glycogen synthesis in osteoblasts. Stimulates glucose transport in bone-derived osteoblastic (PyMS) cells and is effective at much lower concentrations than insulin, not only regarding glycogen and DNA synthesis but also with regard to enhancing glucose uptake. May play a role in synapse maturation (PubMed:21076856, PubMed:24132240). Ca(2+)-dependent exocytosis of IGF1 is required for sensory perception of smell in the olfactory bulb (By similarity). Acts as a ligand for IGF1R. Binds to the alpha subunit of IGF1R, leading to the activation of the intrinsic tyrosine kinase activity which autophosphorylates tyrosine residues in the beta subunit thus initiating a cascade of down-stream signaling events leading to activation of the PI3K-AKT/PKB and the Ras-MAPK pathways. Binds to integrins ITGAV:ITGB3 and ITGA6:ITGB4. Its binding to integrins and subsequent ternary complex formation with integrins and IGFR1 are essential for IGF1 signaling. Induces the phosphorylation and activation of IGFR1, MAPK3/ERK1, MAPK1/ERK2 and AKT1 (PubMed:19578119, PubMed:22351760, PubMed:23243309, PubMed:23696648). As part of the MAPK/ERK signaling pathway, acts as a negative regulator of apoptosis in cardiomyocytes via promotion of STUB1/CHIP-mediated ubiquitination and degradation of ICER-type isoforms of CREM (By similarity).

Cellular Location Secreted {ECO:0000250|UniProtKB:P05017}.

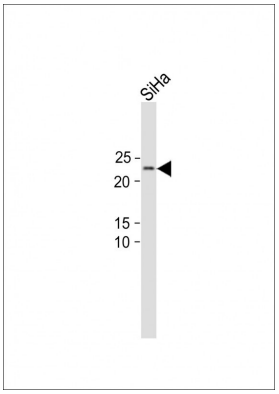
Background

The protein encoded by this gene is similar to insulin in function and structure and is a member of a family of proteins involved in mediating growth and development. The encoded protein is processed from a precursor, bound by a specific receptor, and secreted. Defects in this gene are a cause of insulin-like growth factor I deficiency. Several transcript variants encoding different isoforms have been found for this gene.

References

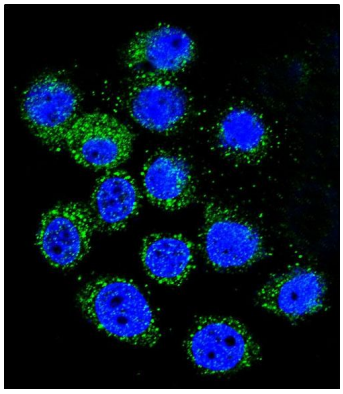
Li, M., et al. J. Biol. Chem. 285(40):30480-30488(2010)
Canzian, F., et al. Hum. Mol. Genet. 19(19):3873-3884(2010)
Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010) :
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Szczesny, G., et al. Arch Orthop Trauma Surg (2010) In press :

Images

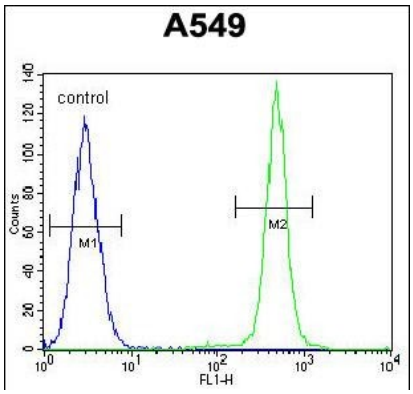


All lanes: Anti- IGF1 Antibody (C-term) at 1:1000 dilution + SiHa whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 22 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

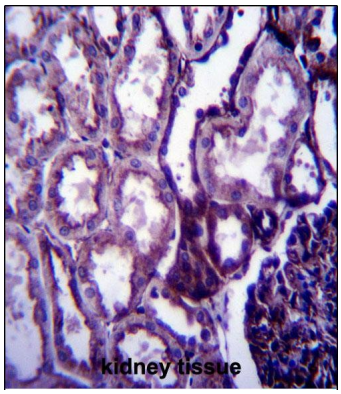
Confocal immunofluorescent analysis of IGF1 Antibody (C-term)(Cat#AP14099b) with A549 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI



was used to stain the cell nuclear (blue).



IGF1 Antibody (C-term) (Cat. #AP14099b) flow cytometric analysis of A549 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



IGF1 Antibody (C-term) (Cat. #AP14099b)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of IGF1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- The Role of MiR-5094 as a Proliferation Suppressor during Cellular Radiation Response via Downregulating STAT5b

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