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

IGF1 alpha Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP7827b

Specification

IGF1 alpha Antibody (C-term) Blocking peptide - Product Information

Primary Accession	P05019
Other Accession	P01343

IGF1 alpha Antibody (C-term) Blocking peptide - Additional Information

Gene ID 3479

Other Names
Insulin-like growth factor I, IGF-I, Mechano growth factor, MGF, Somatomedin-C, IGF1, IBP1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7827b was selected from the C-term region of human IGF1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

IGF1 alpha Antibody (C-term) Blocking peptide - 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}.

IGF1 alpha Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

IGF1 alpha Antibody (C-term) Blocking peptide - Images

IGF1 alpha Antibody (C-term) Blocking peptide - Background

The somatomedins, or insulin-like growth factors (IGFs), comprise a family of peptides that play important roles in mammalian growth and development. IGF1 mediates many of the growth-promoting effects of growth hormone (GH; MIM 139250). Early studies showed that growth hormone did not directly stimulate the incorporation of sulfate into cartilage, but rather acted through a serum factor, termed 'sulfation factor,' which later became known as 'somatomedin' (Daughaday et al., 1972 [PubMed 4550398]). Three main somatomedins have been characterized: somatomedin C (IGF1), somatomedin A (IGF2; MIM 147470), and somatomedin B (MIM 193190) (Rotwein, 1986 [PubMed 3455760]; Rosenfeld, 2003 [PubMed 14657423]).[supplied by OMIM]

IGF1 alpha Antibody (C-term) Blocking peptide - References

Berensztein,E.B., Pediatr. Res. 63 (6), 662-666 (2008)Siddappa,R., Proc. Natl. Acad. Sci. U.S.A. 105 (20), 7281-7286 (2008)Duijts,L., (er) Clin. Endocrinol. (Oxf) (2008)