SANTA CRUZ BIOTECHNOLOGY, INC.

IGF-I (H-9): sc-518040

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Insulin-like growth factor I, or IGF-I, is an ubiquitous peptide that acts in both an autocrine and paracrine fashion to stimulate the growth of vascular smooth muscle cells. In addition, IGF-I regulates renal function, growth and repair, is critically involved in bone formation and resorption and has been implicated in mediating aspects of the immune response. IGF function is modulated by at least six circulating IGF-binding proteins, designated IGFBP1-6, which associate with the soluble growth factor. While the function of IGF-II is less well understood, overexpression of the protein in mice suggests that IGF-II may play a regulatory role in Insulin sensitivity and glucose uptake. Both IGF-I and IGF-II exert their biological effects through a common receptor, designated IGF-IR. Like the Insulin receptor, IGF-IR is composed of two extracellular a chains and two signal transducing β chains cross-linked by disulfide bonds.

CHROMOSOMAL LOCATION

Genetic locus: IGF1 (human) mapping to 12q23.2; Igf1 (mouse) mapping to 10 C1.

SOURCE

IGF-I (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 75-94 within an internal region of IGF-I of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IGF-I (H-9) is available conjugated to agarose (sc-518040 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518040 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518040 PE), fluorescein (sc-518040 FITC), Alexa Fluor® 488 (sc-518040 AF488), Alexa Fluor® 546 (sc-518040 AF546), Alexa Fluor® 594 (sc-518040 AF594) or Alexa Fluor® 647 (sc-518040 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518040 AF680) or Alexa Fluor® 790 (sc-518040 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IGF-I (H-9) is recommended for detection of IGF-I of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IGF-I siRNA (h): sc-37193, IGF-I siRNA (m): sc-37194, IGF-I siRNA (r): sc-156027, IGF-I shRNA Plasmid (h): sc-37193-SH, IGF-I shRNA Plasmid (m): sc-37194-SH, IGF-I shRNA Plasmid (r): sc-156027-SH, IGF-I shRNA (h) Lentiviral Particles: sc-37193-V, IGF-I shRNA (m) Lentiviral Particles: sc-37194-V and IGF-I shRNA (r) Lentiviral Particles: sc-156027-V.

Molecular Weight of IGF-1A isoform: 22 kDa.

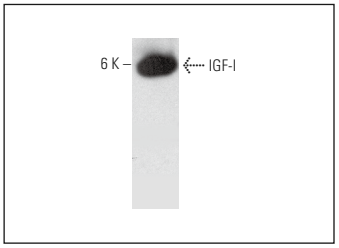
Molecular Weight of IGF-1B isoform: 17 kDa.

Molecular Weight of IGF-3 isoform: 15 kDa.

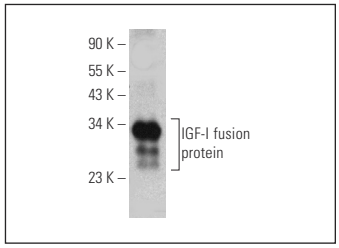
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



IGF-I (H-9): sc-518040. Western blot analysis of mouse recombinant IGF-I.



IGF-I (H-9): sc-518040. Western blot analysis of human recombinant IGF-I fusion protein.

SELECT PRODUCT CITATIONS

1. Vural, B., et al. 2019. Effects of VEGF+ mesenchymal stem cells and platelet-rich plasma on inbred rat ovarian functions in cyclophosphamide-induced premature ovarian insufficiency model. Stem Cell Rev. Rep. 15: 558-573.
2. Liu, D., et al. 2020. Protein diaphanous homolog 1 (Diaph1) promotes myofibroblastic activation of hepatic stellate cells by regulating Rab5a activity and TGFβ receptor endocytosis. FASEB J. 34: 7345-7359.
3. Rodríguez, M.J., et al. 2021. Maresin-1 prevents liver fibrosis by targeting Nrf2 and NFκB, reducing oxidative stress and inflammation. Cells 10: 3406.
4. Sun, L., et al. 2022. PD-L1 promotes myofibroblastic activation of hepatic stellate cells by distinct mechanisms selective for TGF-β receptor I versus II. Cell Rep. 38: 110349.
5. Shigemori, K., et al. 2022. Peripheral Aβ acts as a negative modulator of Insulin secretion. Proc. Natl. Acad. Sci. USA 119: e2117723119.
6. Dordoe, C., et al. 2022. Non-mitogenic fibroblast growth factor 1 protects against ischemic stroke by regulating microglia/macrophage polarization through Nrf2 and NFκB pathways. Neuropharmacology 212: 109064.
7. Yan, X., et al. 2022. Macrophage-derived IGF-1 protects the neonatal intestine against necrotizing enterocolitis by promoting microvascular development. Commun. Biol. 5: 320.
8. Cheng, Y., et al. 2022. HBP1 inhibits the development of type 2 diabetes mellitus through transcriptional activation of the IGFBP1 gene. Aging 14: 8763-8782.
9. Sun, H., et al. 2023. Single-cell RNA sequencing reveals resident progenitor and vascularization-associated cell subpopulations in rat annulus fibrosus. J. Orthop. Translat. 38: 256-267.

RESEARCH USE

For research use only, not for use in diagnostic procedures.