SANTA CRUZ BIOTECHNOLOGY, INC.

IGF-II (H-11): sc-515805

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Insulin gene family, comprised of Insulin, relaxin and Insulin-like growth factors I and II (IGF-I and IGF-II), represents a group of structurally related polypeptides whose biological functions have diverged. The IGFs, or somatomedins, constitute a class of polypeptides that have a key role in pre-adolescent mammalian growth. IGF-I and -II are critical regulators of cell proliferation and differentiation. Most of the growth promoting properties of both ligands are mediated by the IGF-I receptor (IGF-IR). IGF- I and -II, respectively known as somatomedin C and somatomedin A, are single chain polypeptides which share an amino acid sequence homology of about 47% with Insulin. IGF-I expression is regulated by growth hormone and mediates postnatal growth, while IGF-II is induced by placental lactogen during prenatal development. IGF-II is a fetal growth factor, influenced by placental lactogen and abundantly expressed by placental trophoblasts. IGF-II and IGF-binding protein 1 (IGFBP1) gene variants are associated with overfeeding-induced metabolic changes. The human IGF-II gene maps to chromosome 11p15.5, encoding a 180 amino acid protein which is the precursor to IGF-II.

CHROMOSOMAL LOCATION

Genetic locus: IGF2 (human) mapping to 11p15.5.

SOURCE

IGF-II (H-11) is a mouse monoclonal antibody raised against amino acids 78-180 of IGF-II of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IGF-II (H-11) is available conjugated to agarose (sc-515805 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515805 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515805 PE), fluorescein (sc-515805 FITC), Alexa Fluor® 488 (sc-515805 AF488), Alexa Fluor® 546 (sc-515805 AF546), Alexa Fluor® 594 (sc-515805 AF594) or Alexa Fluor® 647 (sc-515805 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515805 AF680) or Alexa Fluor® 790 (sc-515805 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IGF-II (H-11) is recommended for detection of IGF-II of 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-II siRNA (h): sc-39576, IGF-II shRNA Plasmid (h): sc-39576-SH and IGF-II shRNA (h) Lentiviral Particles: sc-39576-V.

Molecular Weight of IGF-II precursor: 23 kDa.

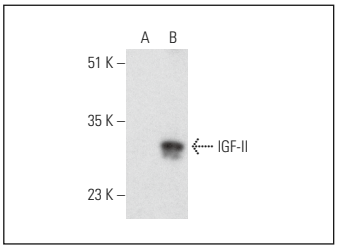
Molecular Weight of mature secreted IGF-II: 8 kDa.

Positive Controls: human IGF2 transfected HEK293T whole cell lysate.

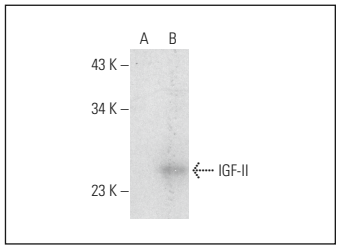
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IGF-II (H-11): sc-515805. Western blot analysis of IGF-II expression in non-transfected (**A**) and human IGF2 transfected (**B**) HEK293T whole cell lysates.



IGF-II (H-11): sc-515805. Western blot analysis of IGF-II expression in non-transfected (**A**) and human IGF2 transfected (**B**) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, J., et al. 2020. LIN28B-AS1-IGF2BP1 binding promotes hepatocellular carcinoma cell progression. Cell Death Dis. 11: 741.
2. Zhang, Y., et al. 2021. Long non-coding RNA IGF2-AS represses breast cancer tumorigenesis by epigenetically regulating IGF2. Exp. Biol. Med. 246: 371-379.
3. Macht, V., et al. 2021. Galantamine prevents and reverses neuroimmune induction and loss of adult hippocampal neurogenesis following adolescent alcohol exposure. J. Neuroinflammation 18: 212.
4. Fan, L.L., et al. 2022. Loss of RTN3 phenocopies chronic kidney disease and results in activation of the IGF2-JAK2 pathway in proximal tubular epithelial cells. Exp. Mol. Med. 54: 653-661.
5. Qiu, J., et al. 2022. Antenatal dexamethasone retarded fetal long bones growth and development by down-regulating of Insulin-like growth factor 1 signaling in fetal rats. Hum. Exp. Toxicol. 41: 9603271211072870.

STORAGE

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

RESEARCH USE

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