

# IGF-II (F-20): sc-7435

## BACKGROUND

The Insulin gene family, comprises Insulin, relaxin, Insulin-like growth factors I and II (IGF-I and IGF-II), and 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 and most of the growth promoting properties of both ligands are mediated by the IGF-I receptor (IGF-IR). IGF-I and II, also known as somatomedin C and somatomedin A, respectively, 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 and encodes a 180-amino acid protein which is the precursor to IGF-II.

## CHROMOSOMAL LOCATION

Genetic locus: IGF2 (human) mapping to 11p15.5; Igf2 (mouse) mapping to 7 F5.

## SOURCE

IGF-II (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IGF-II of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7435 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

IGF-II (F-20) is recommended for detection of IGF-II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

IGF-II (F-20) is also recommended for detection of IGF-II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IGF-II siRNA (h): sc-39576, IGF-II siRNA (m): sc-39577, IGF-II shRNA Plasmid (h): sc-39576-SH, IGF-II shRNA Plasmid (m): sc-39577-SH, IGF-II shRNA (h) Lentiviral Particles: sc-39576-V and IGF-II shRNA (m) Lentiviral Particles: sc-39577-V.

Molecular Weight of IGF-II precursor: 23 kDa.

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

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Watanabe, Y., et al. 2005. Conditioned medium of the primary culture of rat choroid plexus epithelial (modified ependymal) cells enhances neurite outgrowth and survival of hippocampal neurons. *Neurosci. Lett.* 379: 158-163.
2. Hirata, T., et al. 2007. The temporal profile of genomic responses and protein synthesis in ischemic tolerance of the rat brain induced by repeated hyperbaric oxygen. *Brain Res.* 1130: 214-222.
3. Ager, E.I., et al. 2008. Expression and protein localisation of IGF2 in the marsupial placenta. *BMC Dev. Biol.* 8: 17.
4. Ziegler, A.N., et al. 2012. IGF-II promotes stemness of neural restricted precursors. *Stem Cells* 30: 1265-1276.
5. Zhang, M., et al. 2013. Anti-insulin-like growth factor-IIP3 DNAszymes inhibit cell proliferation and induce caspase-dependent apoptosis in human hepatocarcinoma cell lines. *Drug Des. Devel. Ther.* 7: 1089-1102.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **IGF-II (8H1): sc-293176**, our highly recommended monoclonal alternative to IGF-II (F-20).