

IGF-II (D-10): sc-518128

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.

REFERENCES

1. Bell, G.I., et al. 1984. Sequence of a cDNA clone encoding human pre-proinsulin-like growth factor II. *Nature* 310: 775-777.
2. Dull, T.J., et al. 1984. Insulin-like growth factor II precursor gene organization in relation to Insulin gene family. *Nature* 310: 777-781.
3. Raizis, A.M., et al. 1993. Structural analysis of the human Insulin-like growth factor II P3 promoter. *Biochem. J.* 289: 133-139.
4. Ukkola, O., et al. 2001. Insulin-like growth factor II (IGF-II) and IGF-binding protein 1 (IGFBP1) gene variants are associated with overfeeding-induced metabolic changes. *Diabetologia* 44: 2231-2236.
5. Aro, A.L., et al. 2002. Expression of Insulin-like growth factors IGF-I and IGF-II and their receptors during the growth and megakaryocytic differentiation of K562 cells. *Leuk. Res.* 26: 831-837.

CHROMOSOMAL LOCATION

Genetic locus: Igf2 (mouse) mapping to 7 F5.

SOURCE

IGF-II (D-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 55-74 of IGF-II of mouse origin.

PRODUCT

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

IGF-II (D-10) is available conjugated to agarose (sc-518128 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518128 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518128 PE), fluorescein (sc-518128 FITC), Alexa Fluor[®] 488 (sc-518128 AF488), Alexa Fluor[®] 546 (sc-518128 AF546), Alexa Fluor[®] 594 (sc-518128 AF594) or Alexa Fluor[®] 647 (sc-518128 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518128 AF680) or Alexa Fluor[®] 790 (sc-518128 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IGF-II (D-10) is recommended for detection of IGF-II of mouse and rat 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 (m): sc-39577, IGF-II shRNA Plasmid (m): sc-39577-SH and IGF-II shRNA (m) Lentiviral Particles: sc-39577-V.

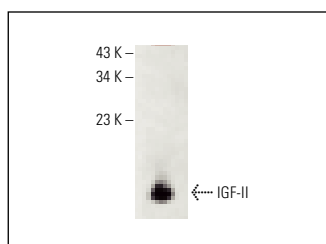
Molecular Weight of IGF-II precursor: 23 kDa.

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

RECOMMENDED 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 L-Agarose: sc-2336 (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 (D-10): sc-518128. Western blot analysis of human recombinant IGF-II. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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