

IGF-IIR (K-21): sc-14413

BACKGROUND

The mannose 6-phosphate/insulin-like growth factor II receptor, IGF-IIR (also designated M6P/IGF2R), is a ubiquitously expressed integral glycoprotein. By binding glycoproteins through two of its extracytoplasmic domains, IGF-IIR mediates the activation of TGF β 1 (a growth inhibitor), the degradation of IGF-II and the transport of lysosomal enzymes. Subsequently, IGF-IIR can form oligomeric complexes, which increase the affinity of IGF-IIR for lysosomal enzymes. Unlike IGF-IR, IGF-IIR does not potentiate the signaling of IGF-I or IGF-II, which have mitogenic, cell survival and Insulin-like effects. Therefore, IGF-IIR is characterized as a tumor suppressor. Furthermore, the IGF-IIR gene is located on chromosome 6q25.3, which is commonly mutated or deleted in several human cancers.

REFERENCES

1. Ellis, M.J., et al. 1998. Insulin-like growth factors in human breast cancer. *Breast Cancer Res. Treat.* 52: 175-184.
2. Braulke, T. 1999. Type-2 IGF receptor: a multi-ligand binding protein. *Horm. Metab. Res.* 31: 242-246.
3. Lorenzo, K., et al. 2000. Invasive properties of murine squamous carcinoma cells: secretion of matrix-degrading cathepsins is attributable to a deficiency in the mannose 6-phosphate/insulin-like growth factor II receptor. *Cancer Res.* 60: 4070-4076.
4. Gemma, A., et al. 2000. Mutation analysis of the gene encoding the human mannose 6-phosphate/insulin-like growth factor 2 receptor (M6P/IGF2R) in human cell lines resistant to growth inhibition by transforming growth factor β ₁ (TGF- β ₁). *Lung Cancer* 30: 91-98.

CHROMOSOMAL LOCATION

Genetic locus: IGF2R (human) mapping to 6q25.3; Igf2r (mouse) mapping to 17 A1.

SOURCE

IGF-IIR (K-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IGF-IIR of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-14413 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

IGF-IIR (K-21) is recommended for detection of IGF-IIR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-IIR siRNA (m): sc-37117, IGF-IIR shRNA Plasmid (m): sc-37117-SH and IGF-IIR shRNA (m) Lentiviral Particles: sc-37117-V.

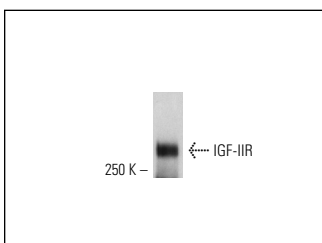
Molecular Weight of IGF-IIR: 300 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

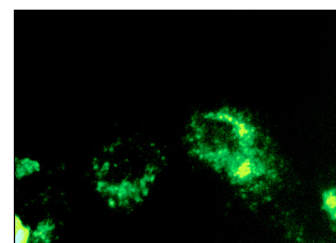
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



IGF-IIR (K-21): sc-14413. Western blot analysis of IGF-IIR expression in HeLa whole cell lysate.



IGF-IIR (K-21): sc-14413. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Ku, H.C., et al. 2012. Green tea (-)-epigallocatechin gallate inhibits IGF-I and IGF-II stimulation of 3T3-L1 preadipocyte mitogenesis via the 67-kDa laminin receptor, but not AMP-activated protein kinase pathway. *Mol. Nutr. Food Res.* 56: 580-592.

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Try **IGF-IIR (29): sc-136321**, our highly recommended monoclonal alternative to IGF-IIR (K-21).