

# IGF-IR $\alpha$ (L-15): sc-31361

## BACKGROUND

Receptor tyrosine kinases (RTKs) are transmembrane molecular scaffolds that influence cellular processes including the cell cycle, cell migration, cell metabolism, cell survival, proliferation and differentiation. Insulin-like growth factor-I receptor (IGF-IR) is an RTK that stimulates growth in many different cell types, blocks apoptosis, acts as an intermediate of many growth hormone responses and may stimulate the growth of some types of cancer. The IGF-IR cognate ligand Insulin-like growth factor-I (IGF-I) promotes association of IGF-IR with Shc, GRB2 and Sos 1, which initiates Ras and ERK kinase cascades, thereby modifying transcription factor activity, such as activation of the Elk transcription factors. The modular phosphotyrosine binding (PTB) domains of Insulin receptor substrate (IRS)-1 and -2 can associate with active IGF-IR and initiate phosphatidylinositol 3-kinase-dependent downstream signals. The human IGF-IR gene maps to chromosome 15q26.3 and encodes a 1,376 amino acid precursor protein that cleaves into  $\alpha$  and  $\beta$  subunits. The human IGF-IR gene maps to chromosome 6q26 and encodes a 2,491 amino acid transmembrane protein.

## REFERENCES

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4. Song, R.X., et al. 2004. The role of Shc and Insulin-like growth factor-I receptor in mediating the translocation of estrogen receptor  $\alpha$  to the plasma membrane. *Proc. Natl. Acad. Sci. USA* 101: 2076-2081.
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6. Salatino, M., et al. 2004. Inhibition of *in vivo* breast cancer growth by antisense oligodeoxynucleotides to type I Insulin-like growth factor receptor mRNA involves inactivation of ErbBs, PI-3K/Akt and p42/p44 MAPK signaling pathways but not modulation of progesterone receptor activity. *Oncogene* 23: 5161-5174.
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## CHROMOSOMAL LOCATION

Genetic locus: IGF1R (human) mapping to 15q26.3; Igf1r (mouse) mapping to 7 D1.

## RESEARCH USE

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

## SOURCE

IGF-IR $\alpha$  (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IGF-IR $\alpha$  of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-31361 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

IGF-IR $\alpha$  (L-15) is recommended for detection of IGF-IR $\alpha$  chain 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-IR $\alpha$  (L-15) is also recommended for detection of IGF-IR $\alpha$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IGF-IR $\alpha$ / $\beta$  siRNA (h): sc-29358, IGF-IR $\alpha$ / $\beta$  siRNA (m): sc-35638, IGF-IR $\alpha$ / $\beta$  shRNA Plasmid (h): sc-29358-SH, IGF-IR $\alpha$ / $\beta$  shRNA Plasmid (m): sc-35638-SH, IGF-IR $\alpha$ / $\beta$  shRNA (h) Lentiviral Particles: sc-29358-V and IGF-IR $\alpha$ / $\beta$  shRNA (m) Lentiviral Particles: sc-35638-V.

Molecular Weight of pro-IGF-IR: 200 kDa.

Molecular Weight of IGF-IR $\alpha$ : 130 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or rat placenta tissue extract: sc-364808.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## STORAGE

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



Try **IGF-IR $\alpha$  (G-5): sc-271606** or **IGF-IR $\alpha$  (2C8): sc-463**, our highly recommended monoclonal alternatives to IGF-IR $\alpha$  (L-15). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **IGF-IR $\alpha$  (G-5): sc-271606**.