SANTA CRUZ BIOTECHNOLOGY, INC.

p-Insulin Rβ (Tyr 1162/1163): sc-25103

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The IGF-I receptor is responsible for the growth effects of both IGF-I and IGF-II and is structurally and functionally similar to the Insulin receptor. The IGF-I receptor and the Insulin receptor are both glycoproteins containing two extracellular α subunits and two transmembrane β subunits. Cytoplasmic protein tyrosine kinase activation occurs through ligand binding to the extracellular domains of the receptors. Kinase activation in turn stimulates an intracellular cascade of molecular interactions involving multiple signaling pathways, leading to the growth and metabolic effects of IGFs and Insulin. The Insulin receptor β subunit is autophosphorylated at Tyrosines 1162 and 1163. Insulin activates this autophosphorylation event which regulates Insulin receptor function.

SOURCE

p-Insulin Rβ (Tyr 1162/1163) is available as either goat (sc-25103) or rabbit (sc-25103-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 1162 and Tyr 1163 phosphorylated Insulin Rβ 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-25103 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Insulin Rβ (Tyr 1162/1163) is recommended for detection of Tyr 1162 and Tyr 1163 dually phosphorylated Insulin Rβ and correspondingly dually phosphorylated IGF-IRβ, Trk A and Trk B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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). p-insulin Rβ (Tyr 1162/1163) is also recommended for detection of correspondingly dually phosphorylated Insulin Rβ and IGF-IRβ, Trk A and Trk B in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Insulin R precursor: 200 kDa.

Molecular Weight of mature Insulin Rβ chain: 95 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

STORAGE

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

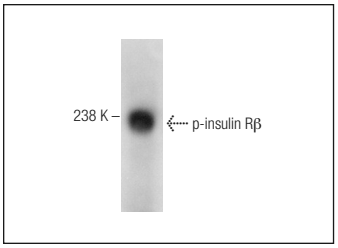
PROTOCOLS

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

RESEARCH USE

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

DATA



p-insulin Rβ (Tyr 1162/1163)-R: sc-25103-R. Western blot analysis of insulin Rβ phosphorylation in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

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4. Ropelle, E.R., et al. 2010. IL-6 and IL-10 anti-inflammatory activity links exercise to hypothalamic Insulin and Leptin sensitivity through IKKβ and ER stress inhibition. PLoS Biol. 8: e1000465.
5. Wu, S., et al. 2011. Insulin resistance secondary to a high-fat diet stimulates longitudinal bone growth and growth plate chondrogenesis in mice. Endocrinology 152: 468-475.
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