Anti-IGF-1R (β-Subunit) Unconjugated

Code No.: AT-2041
Isotype: IgG2b κ (mouse)
Quantity: 100μg/0.2 mL

**BACKGROUND:** Insulin-like growth factor-1 receptor (IGF-1R, also known as CD221), a member of the tyrosine kinase superfamily, is a broadly expressed transmembrane receptor that plays a key role in supporting cell growth and differentiation, and imparts resistance to apoptosis. IGF-1R is synthesized as a single polypeptide that is glycosylated and proteolytically cleaved to yield a disulfide-linked tetrameric receptor composed of two α-subunits and two β-subunits, arranged in the configuration α-β-β-α. IGF-1R’s α-subunits (135 kDa) mediate ligand binding, and are entirely extracellular. IGF-1R’s β-subunits (90 kDa) each possess an extracellular domain, a single transmembrane domain, and a cytoplasmic portion. Three polypeptide ligands for IGF-1R have been identified: IGF-1, IGF-2, and insulin. IGF-1’s binding to the α-subunits of the receptor induces a conformational change, resulting in the trans-autophosphorylation of three tyrosine residues (1131, 1135, and 1136) and activation. Activated IGF-1R phosphorylates substrate proteins, including Shc and insulin receptor substrates (IRS) 1, 2, 3, and 4, and recruits 14-3-3 proteins.

**PRODUCT:** Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 1% bovine serum albumin. 0.05% sodium azide.

**IMMUNOGEN:** Recombinant fragment of the cytoplasmic domain of human IGF-1R β-subunit expressed in E. coli.

**PURIFICATION:** Purified from ascites by affinity chromatography.

**SPECIFICITY:** This antibody recognizes the β-subunit of IGF-1R in human, mouse and rat samples, and does not bind to insulin receptor.

**APPLICATIONS:** This antibody is suitable for use in Western blotting. For Western blotting, the recommended concentration is 1 μg/mL. The optimal antibody concentration should be determined for each specific application.

**STORAGE:** Store at 2-8ºC. For long term storage, aliquot into small volumes and store at –20ºC. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

**POSITIVE CONTROL:** Human MCF-7 cells, mouse L929 cells and rat PC12 cells.


**Western Blot Analysis**

Proteins from cell extracts of human MCF7 cells (lane 1), mouse L929 cells (lane 2), and rat PC12 cells (lane 3) were resolved by SDS-PAGE and transferred to PVDF. The membranes were incubated with this IGF-1R monoclonal antibody (clone 194Q13) at a concentration of 1 µg/mL for two hours at room temperature. After washing, the membranes were incubated with a goat F(ab')2 anti-mouse IgG alkaline phosphatase conjugated antibody at a 1:2000 dilution. Bands were detected with CDP-substrate using the WesternStar™ method (Tropix) and Kodak BioMax film.