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|--------------------------|----------------------------------------------------------------------------------------------|
| <b>Product name:</b>     | IGF-I Receptor $\beta$ (phospho-Tyr980) Rabbit Polyclonal Antibody                           |
| <b>Cat number:</b>       | ABN04819                                                                                     |
| <b>Conjugate:</b>        | Unconjugated                                                                                 |
| <b>Size:</b>             | 100 $\mu$ L                                                                                  |
| <b>Clone:</b>            | Polyclonal                                                                                   |
| <b>Concentration:</b>    | 1mg/ml                                                                                       |
| <b>Host:</b>             | Rabbit                                                                                       |
| <b>Isotype:</b>          | IgG                                                                                          |
| <b>Immunogen:</b>        | Synthesized phospho peptide around human IGF-I Receptor $\beta$ (Tyr980)                     |
| <b>Reactivity:</b>       | Human, Mouse, Rat                                                                            |
| <b>Applications:</b>     | WB 1:1000-1:2000                                                                             |
| <b>Molecular Weight:</b> | pro: 155kDa, receptor beta: 95kDa                                                            |
| <b>Purification:</b>     | Affinity purification                                                                        |
| <b>Form:</b>             | Liquid                                                                                       |
| <b>Buffer:</b>           | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.           |
| <b>Storage:</b>          | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles. |

**Background:**

This receptor binds insulin-like growth factor with a high affinity. It has tyrosine kinase activity. The insulin-like growth factor I receptor plays a critical role in transformation events. Cleavage of the precursor generates alpha and beta subunits. It is highly overexpressed in most malignant tissues where it functions as an anti-apoptotic agent by enhancing cell survival. Alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, May 2014], catalytic activity: ATP + a [protein]-L-tyrosine = ADP + a [protein]-L-tyrosine phosphate., disease: Defects in IGF1R may be a cause in some cases of resistance to insulin-like growth factor 1 (IGF1 resistance) [MIM:270450]. IGF1 resistance is a growth deficiency disorder characterized by intrauterine growth retardation and poor postnatal growth accompanied with increased plasma IGF1., enzyme regulation: Autophosphorylation activates the kinase activity., function: This receptor binds insulin-like growth factor 1 (IGF1) with a high affinity and IGF2 with a lower affinity. It has a tyrosine-protein kinase activity, which is necessary for the activation of the IGF1-stimulated downstream signaling cascade. When present in a hybrid receptor with INSR, binds IGF1. PubMed:12138094 shows that hybrid receptors composed of IGF1R and INSR isoform Long are activated with a high affinity by IGF1, with low affinity by IGF2 and not significantly activated by insulin, and that hybrid receptors composed of IGF1R and INSR isoform Short are activated by IGF1, IGF2 and insulin. In contrast, PubMed:16831875 shows that hybrid receptors composed of IGF1R and INSR isoform Long and hybrid receptors composed of IGF1R and INSR isoform Short have similar binding characteristics, both bind IGF1 and have a low affinity for insulin., online information: IGF-1 receptor entry, PTM: Phosphorylation of Tyr-980 is required for IRS1- and SHC1-binding., PTM: The cytoplasmic domain of the beta subunit is autophosphorylated on tyrosine residues in response to insulin-like growth factor I (IGF I)., similarity: Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily., similarity: Contains 1 protein kinase domain., similarity: Contains 3 fibronectin type-III domains., subunit: Tetramer of 2 alpha and 2 beta chains linked by disulfide bonds. The alpha chains contribute to the formation of the ligand-binding domain, while the beta chain carries the kinase domain. Interacts with PIK3R1 and with the PTB/PID domains of IRS1 and SHC1 in vitro when autophosphorylated on tyrosine residues. Forms a hybrid receptor with INSR, the hybrid is a tetramer consisting of 1 alpha chain and 1 beta chain of INSR and 1 alpha chain and 1 beta chain of IGF1R., tissue specificity: Found as a hybrid receptor with INSR in muscle, heart, kidney, adipose tissue, skeletal muscle, hepatoma, fibroblasts, spleen and placenta (at protein level). Expressed in a variety of tissues.,