



IGF-IR Receptor β (Phospho Tyr1135) Rabbit mAb

Catalog No	YP-rAb-18312
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IF,ELISA
Gene Name	IGF1R
Protein Name	IGF-I Receptor β
Purification Process	Protein A
Specificity	IGF-IR Receptor β (Phospho Tyr1135) Antibody detects endogenous levels of IGF-IR Receptor β protein only when phosphorylated at Tyr1135. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):HRdLA
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000;
Concentration	0.5 mg/ml
Purity	$\geq 90\%$
Storage Stability	-15°C to -25°C /1 year(Do not lower than -25°C)
Synonyms	Insulin-like growth factor 1 receptor ; Insulin-like growth factor I receptor ; IGF-I receptor ; CD antigen CD221 ; [Cleaved into: Insulin-like growth factor 1 receptor alpha chain ; Insulin-like growth factor 1 receptor beta chain]
Observed Band	115kD
Calculated Molecular Weight	155kD
Cell Pathway	Cell membrane ; Single-pass type I membrane protein .
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. Overexpressed in tumors, including melanomas, cancers of the colon, pancreas prostate and kidney.




Function

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.

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],

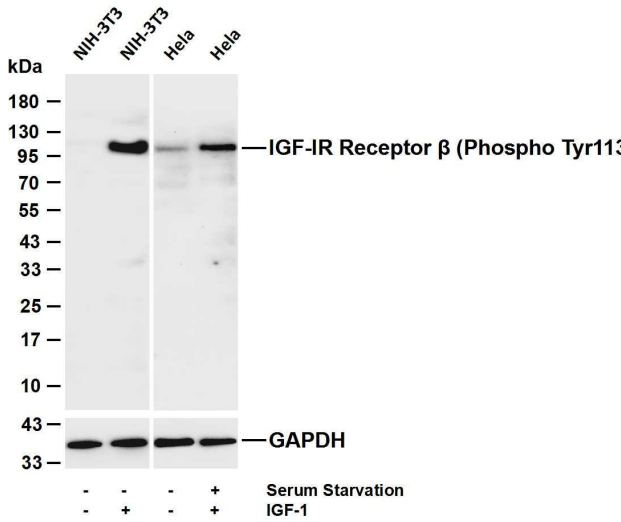
matters needing attention

Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-IGF-IR Receptor β (Phospho Tyr1135) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: NIH-3T3 Lane 2: NIH-3T3 was treated with IGF-1(50ng/ml) for 5 minutes Lane 3: HeLa Lane 4: HeLa was starved overnight with serum and treated with IGF-1(100ng/mL) for 20 minutes Predicted band size: 155kDa Observed band size: 115kDa

