

Datasheet for ABIN5519001
anti-IGF1R antibody (AA 31-257)



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Overview

Quantity:	100 µg
Target:	IGF1R
Binding Specificity:	AA 31-257
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This IGF1R antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA

Product Details

Purpose:	Anti-IGF1 Receptor/Igf1r Antibody Picoband®
Immunogen:	E. coli-derived mouse IGF1 Receptor recombinant protein (Position: E31-K257).
Isotype:	IgG
Cross-Reactivity (Details):	No cross-reactivity with other proteins.
Characteristics:	Anti-IGF1 Receptor/Igf1r Antibody Picoband® (ABIN5519001). Tested in ELISA, IHC, WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Purification:	Immunogen affinity purified.

Target Details

Target:	IGF1R
Alternative Name:	Igf1r (IGF1R Products)
Background:	Synonyms: Insulin-like growth factor 1 receptor, 2.7.10.1, Insulin-like growth factor I receptor, IGF-I receptor, CD221, Insulin-like growth factor 1 receptor alpha chain, Insulin-like growth factor 1 receptor beta chain, Igf1r, Background: IGF1R (Insulin-like Growth Factor 1 (IGF-1) Receptor) is a protein found on the surface of human cells. It is a transmembrane receptor that is activated by a hormone called Insulin-like growth factor 1 (IGF-1) and by a related hormone called IGF-2. It belongs to the large class of tyrosine kinase receptors. The IGF1R gene is mapped on 15q26.3. IGF-1 plays an important role in growth and continues to have anabolic effects in adults - meaning that it can induce hypertrophy of skeletal muscle and other target tissues. Using a yeast 2-hybrid system, it was identified a regulatory subunit of phosphatidylinositol (PI) 3-kinase, PIK3R3, as a binding partner of IGF1R. Functional interaction between BRCA1 and SP1 in the regulation of the IGF1R gene was studied in Schneider cells, a Drosophila cell line which lacks endogenous SP1. In these cells, BRCA1 suppressed 45 % of the SP1-induced trans-activation of the IGF1R promoter. Overexpression of the Grb10-binding fragment of Ggryf1 resulted in a significant increase in Igf1-stimulated Igf1r tyrosine phosphorylation. Like the insulin receptor, the IGF-1 receptor is a receptor tyrosine kinase - meaning it signals by causing the addition of a phosphate molecule on particular tyrosines. IGF-1 activates the Insulin receptor at approximately 0.1x the potency of insulin. Part of this signaling may be via IGF1R-InsulinReceptor heterodimers.
Molecular Weight:	155 kDa
Gene ID:	16001
Pathways:	RTK Signaling , Regulation of Hormone Metabolic Process , Regulation of Hormone Biosynthetic Process , Autophagy

Application Details

Application Notes:	Western blot, 0.1-0.5 µg/mL Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/mL ELISA, 0.1-0.5 µg/mL 1. Abbott, A. M., Bueno, R., Pedrini, M. T., Murray, J. M., Smith, R. J. Insulin-like growth factor I receptor gene structure. J. Biol. Chem. 267: 10759-10763, 1992. 2. Dey, B. R., Furlanetto, R. W., Nissley, S. P. Cloning of human p55-gamma, a regulatory subunit of phosphatidylinositol 3-
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Application Details

kinase, by a yeast two-hybrid library screen with the insulin-like growth factor-I receptor. Gene 209: 175-183, 1998. 3. Giovannone, B., Lee, E., Laviola, L., Giorgino, F., Cleveland, K. A., Smith, R. J. Two novel proteins that are linked to insulin-like growth factor (IFG-I) receptors by the Grb10 adapter and modulate IGF-I signaling. J. Biol. Chem. 278: 31564-31573, 2003.

Comment: We recommend Enhanced Chemiluminescent Kit with anti-Rabbit IgG (ABIN921124) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).

Restrictions: For Research Use only

Handling

Format: Lyophilized

Reconstitution: Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.

Concentration: 500 µg/mL

Buffer: Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na₂HPO₄, 0.05 mg NaN₃.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: 4 °C, -20 °C

Storage Comment: Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

Publications

Product cited in: Li, Chen, Liu, Hou: "Long-pulse gastric electrical stimulation protects interstitial cells of Cajal in diabetic rats via IGF-1 signaling pathway." in: **World journal of gastroenterology**, Vol. 22, Issue 23, pp. 5353-63, (2017) ([PubMed](#)).

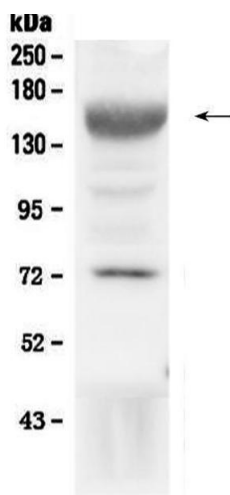
Hou, Wan, Wang, Li, Wang, Yao, Feng, Jing, Lu, Jia, Peng: "Let-7a inhibits migration of melanoma cells via down-regulation of HMGA2 expression." in: **American journal of translational research**, Vol. 8, Issue 9, pp. 3656-3665, (2016) ([PubMed](#)).

Liang, Hao, Zhang, Wu, Wang: "Insulin-like growth factors in endometrioid adenocarcinoma:

correlation with clinico-pathological features and estrogen receptor expression." in: **BMC cancer**, Vol. 12, pp. 262, (2013) ([PubMed](#)).

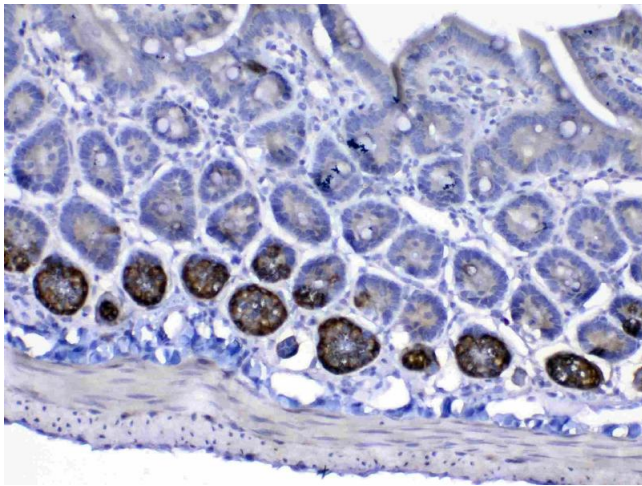
Zhang, Leng, Wang, Zhang: "Treating human meniscal fibrochondrocytes with hIGF-1 gene by liposome." in: **Clinical orthopaedics and related research**, Vol. 467, Issue 12, pp. 3175-82, (2010) ([PubMed](#)).

Images



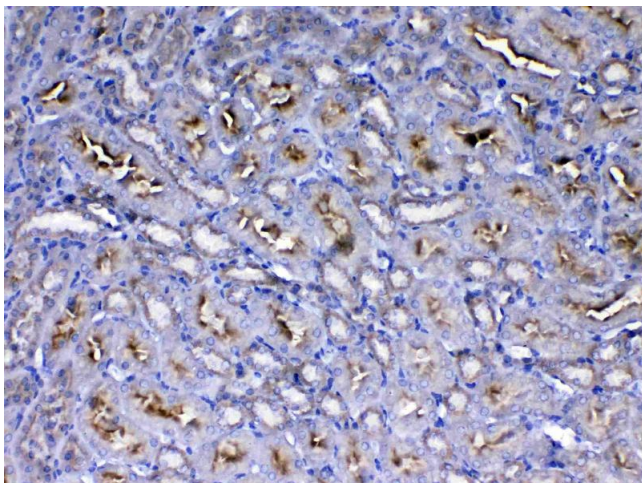
Western Blotting

Image 1. Western blot analysis of IGF1 Receptor using anti-IGF1 Receptor antibody . Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each Lane was loaded with 50ug of sample under reducing conditions. Lane 1: mouse liver tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IGF1 Receptor antigen affinity purified polyclonal antibody (Catalog #) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for IGF1 Receptor at approximately 155KD. The expected band size for IGF1 Receptor is at 155KD.



Immunohistochemistry

Image 2. IHC analysis of IGF1 Receptor using anti-IGF1 Receptor antibody .IGF1 Receptor was detected in paraffin-embedded section of mouse small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IGF1 Receptor Antibody overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



Immunohistochemistry

Image 3. IHC analysis of IGF1 Receptor using anti-IGF1 Receptor antibody .IGF1 Receptor was detected in paraffin-embedded section of mouse kidney tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IGF1 Receptor Antibody overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.