abcam

Product datasheet

Anti-Insulin Receptor beta antibody [EPR22167] ab227831

Recombinant RabMAb

2 References 6 Images

Overview

Product name	Anti-Insulin Receptor beta antibody [EPR22167]
Description	Rabbit monoclonal [EPR22167] to Insulin Receptor beta
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IP **Unsuitable for:** ELISA
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HepG2, HEK-293T, LNCaP, HeLa and MCF7 whole cell lysates; Human fetal brain and liver lysates. IHC-P: Human kidney and kidney carcinoma tissues. IP: HepG2 whole cell lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 0.05% BSA, 49% Glycerol (glycerin, glycerine), PBS
Purity	Protein A purified
Clonality	Monoclonal

Clone number EPR22167

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227831 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 210, 95, 49 kDa (predicted molecular weight: 156 kDa).
IHC-P		1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		1/30.

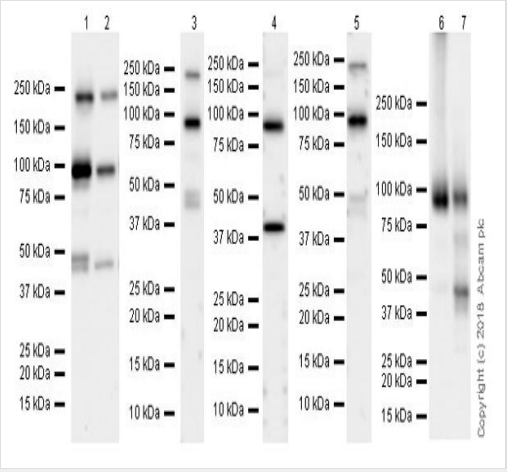
Application notes Is unsuitable for ELISA.

Target

Relevance Insulin receptor mediates the biological activities of insulin by regulating multiple signaling pathways through activation of a series of phosphorylation cascades. The human insulin receptor is a heterotetrameric membrane glycoprotein consisting of disulfide-linked subunits in a ß-a-a-ß configuration. The ß-subunit (95kDa) possesses a single transmembrane domain with tyrosine kinase acivity, whereas the a-subunit (135kDa) is completely extracellular. The alpha subunits each contain insulin binding sites and are entirely extracellular in localization. The beta subunits each possess an extracellular domain, a single transmembrane domain, and a cytoplasmic tyrosine kinase domain. Binding of insulin to the alpha subunits induces a conformation change in the receptor which activates the kinase domain, stimulating tyrosine autophosphorylation of the receptor and tyrosine phosphorylation of at least five different insulin receptor substrates designated IRS-1-4, and Shc.

Cellular localization Membrane; Single pass type I membrane protein.

Images



Western blot - Anti-Insulin Receptor beta antibody [EPR22167] (ab227831)

All lanes : Anti-Insulin Receptor beta antibody [EPR22167] (ab227831) at 1/1000 dilution

Lane 1 : HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate at 20 µg
Lane 2 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate at 20 µg
Lane 3 : LNCaP (human prostate cancer cell line) whole cell lysate at 10 µg
Lane 4 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 10 µg
Lane 5 : MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 10 µg
Lane 6 : Human fetal brain lysate at 10 µg
Lane 7 : Human liver lysate at 10 µg

Secondary
Lanes 1-5 : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution
Lanes 6-7 : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

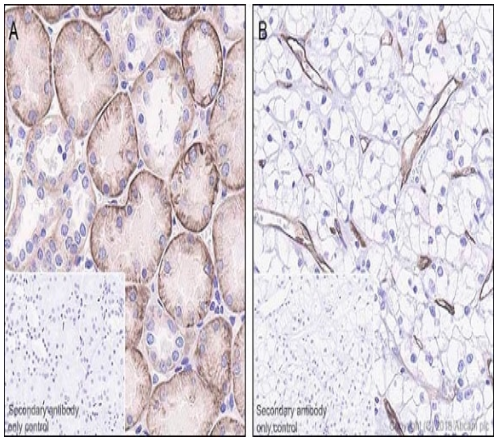
Predicted band size: 156 kDa

Exposure time : Lanes 1-2: 48 seconds; Lanes 3: 59 seconds; Lanes 4&6-7: 70 seconds; Lane 5: 37 seconds.

Blocking/Dilution buffer: 5% NFDM/TBST.

The 210 kDa band is the pro-insulin receptor, while the 95 kDa band is the insulin receptor beta subunit (PMID: 28765322, PMID: 28915606).

The 45-68 kDa bands are proteolytic cleavage fragments (PMID: 28915606, PMID: 6693383, PMID: 6315728).

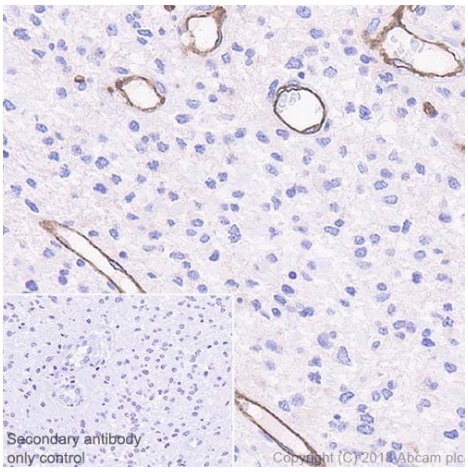


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin Receptor beta antibody [EPR22167] (ab227831)

Immunohistochemical analysis of paraffin-embedded human kidney (Panel A) and kidney carcinoma (Panel B) tissues labeling Insulin Receptor beta with ab227831 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Cytoplasmic staining in human kidney tubules (panel A). Positive staining in endothelium of blood vessels in human kidney carcinoma (panel B), PMID: 25864925, PMID: 20182859. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

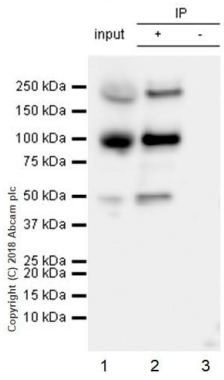


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin Receptor beta antibody [EPR22167] (ab227831)

Immunohistochemical analysis of paraffin-embedded human glioma tissue labeling Insulin Receptor beta with ab227831 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Positive staining in endothelium of blood vessels in human glioma (PMID: 26136493) is observed. Counter stained with hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Insulin Receptor beta antibody [EPR22167] (ab227831)

Insulin Receptor beta was immunoprecipitated from 0.35 mg of HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate with ab227831 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab227831 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/5000 dilution.

Lane 1: HepG2 whole cell lysate 10 µg (Input).

Lane 2: 227831 IP in HepG2 whole cell lysate.

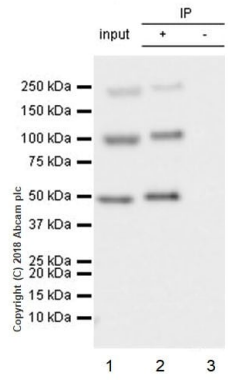
Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of 227831 in HepG2 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 5 seconds.

The 210 kDa band is the pro-Insulin receptor, while the 95 kDa band is the insulin receptor beta subunit (PMID: 28765322, PMID: 28915606).

The 45-68 kDa bands are proteolytic cleavage fragments (PMID: 28915606, PMID: 6693383, PMID: 6315728).



Immunoprecipitation - Anti-Insulin Receptor beta antibody [EPR22167] (ab227831)

Insulin Receptor beta was immunoprecipitated from 0.35 mg of HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell lysate with ab227831 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab227831 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/5000 dilution.

Lane 1: HEK-293T whole cell lysate 10 µg (Input).

Lane 2: 227831 IP in HEK-293T whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of 227831 in HEK-293T whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 5 seconds.

The 210 kDa band is the pro-Insulin receptor, while the 95 kDa band is the insulin receptor beta subunit (PMID: 28765322, PMID: 28915606).

The 45-68 kDa bands are proteolytic cleavage fragments (PMID: 28915606, PMID: 6693383, PMID: 6315728).

Anti-Insulin Receptor beta antibody [EPR22167]

(ab227831)

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