abcam

Product datasheet

Anti-Insulin Receptor beta antibody [EPR22167] - BSA and Azide free ab236764

Recombinant RabMAb

5 Images

Overview

Product name	Anti-Insulin Receptor beta antibody [EPR22167] - BSA and Azide free
Description	Rabbit monoclonal [EPR22167] to Insulin Receptor beta - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human kidney and kidney carcinoma tissues.
General notes	ab236764 is the carrier-free version of **ab227831**. Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications. Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold. This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. 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. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR22167
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab236764 in the following tested applications.

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

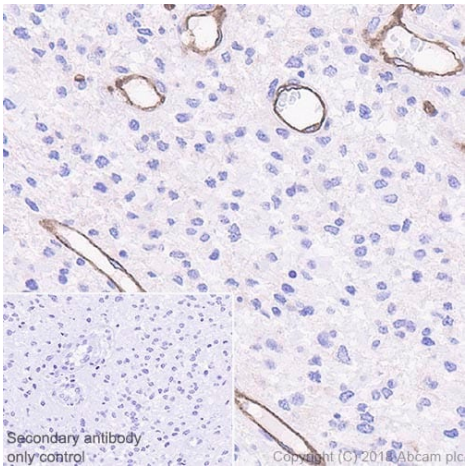
Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Detects a band of approximately 210, 95, 49 kDa (predicted molecular weight: 156 kDa).
IP		Use at an assay dependent concentration.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA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

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



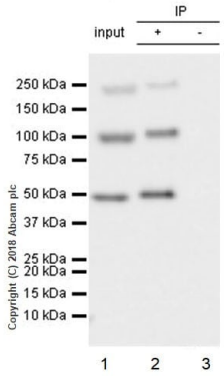
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin Receptor beta antibody [EPR22167] - BSA and Azide free (ab236764)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab227831**).

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] - BSA and Azide free (ab236764)

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.

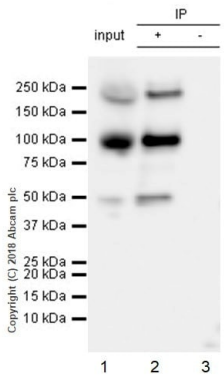
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

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).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab227831**).



Immunoprecipitation - Anti-Insulin Receptor beta antibody [EPR22167] - BSA and Azide free (ab236764)

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).

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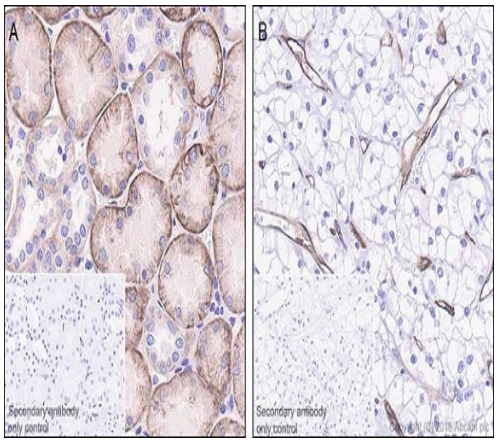


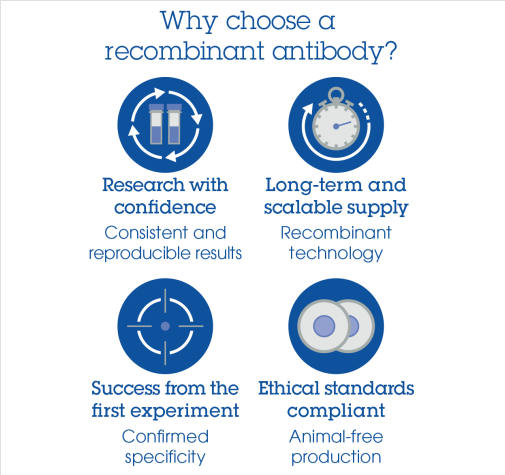
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Insulin Receptor beta antibody [EPR22167] - BSA and Azide free (ab236764)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab227831**).

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



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