abcam

Product datasheet

Anti-IRS1 (phospho S312) antibody ab4865

3 References 1 Image

Overview

Product name	Anti-IRS1 (phospho S312) antibody
Description	Rabbit polyclonal to IRS1 (phospho S312)
Host species	Rabbit
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Pig
Immunogen	Synthetic peptide corresponding to Human IRS1 (phospho S312).
Positive control	Phorbol ester stimulated (TPA) Chinese Hamster Ovary cell line expressing human insulin receptor (CHO-T) and transiently transfected with a plasmid encoding human IRS 1.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.30 Preservative: 0.05% Sodium azide Constituents: PBS, Glycerol (glycerin, glycerine), 0.1% BSA
Purity	Immunogen affinity purified
Purification notes	Purified from rabbit serum by sequential epitope-specific chromatography. The antibody has been negatively preadsorbed using a non-phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated IRS 1. The final product is generated by affinity chromatography using an IRS 1-derived peptide phosphorylated at serine 312.

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab4865 in the following tested applications.

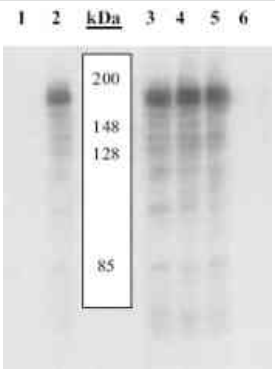
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Predicted molecular weight: 165 kDa.

Target

Function	May mediate the control of various cellular processes by insulin. When phosphorylated by the insulin receptor binds specifically to various cellular proteins containing SH2 domains such as phosphatidylinositol 3-kinase p85 subunit or GRB2. Activates phosphatidylinositol 3-kinase when bound to the regulatory p85 subunit.
Involvement in disease	Polymorphisms in IRS1 may be involved in the etiology of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853].
Sequence similarities	Contains 1 IRS-type PTB domain. Contains 1 PH domain.
Post-translational modifications	Serine phosphorylation of IRS1 is a mechanism for insulin resistance. Ser-312 phosphorylation inhibits insulin action through disruption of IRS1 interaction with the insulin receptor. Phosphorylation of Tyr-896 is required for GRB2-binding.

Images



Western blot - Anti-IRS1 (phospho S312) antibody (ab4865)

Peptide Competition and Phosphatase Stripping: Extracts prepared from CHO-T cells transiently transfected with wild-type human IRS 1 and treated with TPA were resolved by SDS-PAGE on a 10% polyacrylamide gel and transferred to PVDF. Membranes were treated with lambda phosphatase (1) or left untreated (2-6), blocked with a 5% BSA-TBST buffer overnight at 4^{o}C, then incubated with 0.50 µg/mL ab4865 antibody for two hours at room temperature in a 3% BSA-TBST buffer, following prior incubation with: no peptide (1-3), the non-phosphopeptide corresponding to the immunogen (4), a generic phosphoserine containing peptide (5), or, the phosphopeptide immunogen (6). After washing, membranes were incubated with goat F(ab')2 anti-rabbit IgG alkaline phosphatase and signals were detected using the Tropix WesternStar method. The data show that only the peptide corresponding to ab4865 blocks the antibody signal, thereby demonstrating the specificity of the anti

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