Mouse (monoclonal) Anti-IRS-2 Unconjugated

PRODUCT ANALYSIS SHEET

Catalog Number:	AHO1532
Lot Number:	See product label
Quantity/Volume:	100 µg/0.2 mL
Clone Number:	8S15
Isotype:	IgG1 κ (mouse)
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline, pH 7.4.
Preservation:	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified from ascites by affinity chromatography.
Immunogen:	Recombinant human IRS-2 N-terminal fragment.
Specificity:	This antibody recognizes an 180 kDa protein identified as insulin receptor substrate 2 (IRS-2). Insulin exerts its effects by binding to the insulin receptor, disulfide-linked heterotetrameric protein comprised of two α subunits and two β subunits. The α subunits each contain insulin binding sites and are entirely extracellular in localization. The β subunits each possess an extracellular domain, a single transmembrane domain, and a cytoplasmic tyrosine kinase domain. Binding of insulin to the α 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. This tyrosine phosphorylation produces docking sites for proteins bearing SH2 domains, such as PI3-K, Grb-2, Nck, and Crk. While tyrosine phosphorylation of insulin receptor substrates propagates signaling from insulin, serine and threonine phosphorylation by MAPK's, PKA, and PKC may reduce insulin signaling.
Species Reactivity:	Human and mouse. Other species were not tested.
Applications:	This antibody is suitable for use in Western blotting.
Suggested Working Dilutions:	For Western blotting, the recommended concentration is 1 µg/mL. The optimal antibody concentration should be determined for each specific application.
Recommended Positive Control:	Human Jurkat and HeLa cells, and mouse NIH3T3 cells.
Storage:	Store at 2-8ºC. For long term storage, aliquot into small volumes and store at –20ºC. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

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References:

Dearth, R.K. et al, (2006) Mammary tumorigenesis and metastasis caused by overexpression of insulin receptor substrate 1 (IRS-1) or IRS-2. Mol Cell Biol. 26:9302-9314.

Greene, M.W., et al. (2003) Modulation of insulin stimulated degradation of human insulin receptor substrate-1 by serine 312 phosphorylation. J. Biol. Chem. 278:8199-8211.

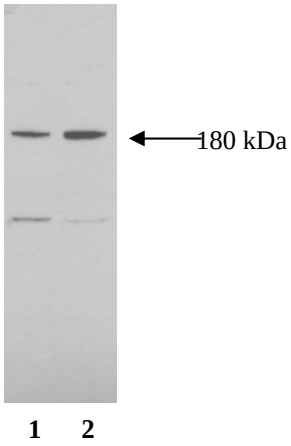
Sun, X.J., et al. (1995) Role of IRS-2 in insulin and cytokine signalling. Nature 377:173-177.

Mothe I., and E. van Obberghen (1996) Phosphorylation of insulin receptor substrate-1 on multiple serine residues, 612, 632, 662, and 731, modulates insulin action. J. Biol. Chem. 271:11222-11227.

White, M.F. (1998) The IRS-signalling system: a network of docking proteins that mediate insulin action. Mol. Cell. Biochem. 182(1-2):3-11.

Related Products:

Anti IRS-1 monoclonal antibody	Cat. # AHO1322
IRS-1 (total) ELISA	Cat. # KHO0511
IRS-1 pS312 ELISA	Cat. # KHO0521
Anti-IRS-2 [pS721] antibody	Cat. # 44-828



Western Blot Analysis

Proteins from cell extracts of human Jurkat and HeLa cells were resolved by SDS-PAGE and transferred to PVDF. The membranes were incubated with this IRS-2 monoclonal antibody (clone 8S15) at a concentration of 1 µg/mL for two hours at room temperature (Lane 1 – Jurkat, Lane 2 – HeLa). After washing, the membranes were incubated with a goat $F(ab')_2$ anti-mouse IgG HRP conjugated antibody (Cat. #65-6420) at a 1:5000 dilution. Bands were detected with ECL Chemiluminescent Substrate and Pierce CL-X Posure™ film.