



# Rabbit (polyclonal) Anti-IRS-2 (pS<sup>731</sup>) Phosphospecific Antibody, Unconjugated

## PRODUCT ANALYSIS SHEET

<b>Catalog Number:</b>	44-828
<b>Lot Number:</b>	See product label
<b>Quantity/Volume:</b>	See product label
<b>Form of Antibody:</b>	Purified rabbit polyclonal immunoglobulin in phosphate buffered saline, pH 7.4.
<b>Preservation:</b>	0.02% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
<b>Purification:</b>	Purified from rabbit serum by epitope affinity chromatography.
<b>Immunogen:</b>	This antibody was produced against a chemically synthesized phosphopeptide derived from the human IRS-2 sequence, corresponding to the serine 731 phosphorylation site. This site corresponds to serine 133 in mouse, and serine 233 in rat.
<b>Specificity:</b>	Insulin exerts its effects by binding to the insulin receptor, a disulfide-linked heterotetrameric protein comprised of two $\alpha$ subunits and two $\beta$ subunits arranged in the following configuration: $\beta$ - $\alpha$ - $\alpha$ - $\beta$ . 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. 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. This antibody recognizes IRS-2 when phosphorylated at serine 731.
<b>Species Reactivity:</b>	Human, mouse, and rat. Other species were not tested.
<b>Applications:</b>	This antibody is suitable for use in ELISA, Western blotting, and immunoprecipitation.
<b>Suggested Working Dilutions:</b>	The recommended concentration for use in immunoprecipitation is 3-5 $\mu$ g/extract from $10^7$ cells; for Western blotting, 0.5-2.0 $\mu$ g/mL; and for ELISA, 0.1-1.0 $\mu$ g/mL. The optimal concentration should be determined for each specific application.
<b>Recommended Positive Control:</b>	Serum-treated mouse fibroblast (3T3) cells.

**This product is for research use only. Not for use in diagnostic procedures.**

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PI44828

(Rev 11/08) DCC-08-1089

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**Storage:** Store at 2-8°C for up to one month. For long term storage, apportion into working aliquots and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

**Expiration Date:** Expires one year from date of receipt when stored as instructed.

**References:**

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