

# Mouse (monoclonal) Anti-Human IGF-1R ( $\alpha$ -Subunit)

## PRODUCT ANALYSIS SHEET

<b>Catalog Number:</b>	AHR0351
<b>Lot Number:</b>	See product label
<b>Quantity/Volume:</b>	100 $\mu$ g/0.5 mL
<b>Clone Number:</b>	24-60
<b>Isotype:</b>	Mouse IgG2a kappa
<b>Form of Antibody:</b>	Purified immunoglobulin in phosphate buffered saline, pH 7.4, with 0.2% bovine serum albumin.
<b>Preservation:</b>	0.09% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
<b>Purification:</b>	Purified from ascites by Protein A affinity chromatography.
<b>Immunogen:</b>	IGF-1R/3T3 mouse fibroblasts transfected with human type 1 IGF-receptor cDNA.
<b>Myeloma/Fusion Partners:</b>	Produced by fusion between BALB/c mouse splenocytes and mouse myeloma NSO/1 cells.
<b>Specificity:</b>	<p>This monoclonal antibody recognizes a protein of <math>M_r=125</math> kDa, identified as the <math>\alpha</math>-subunit of type 1 insulin-like growth factor receptor (IGF-IR). As with the receptor for insulin, IGF-1R is synthesized as a single polypeptide which is glycosylated and proteolytically cleaved to yield a receptor composed of two <math>\alpha</math>- and two <math>\beta</math>-subunits arranged in the following configuration: <math>\beta</math>-<math>\alpha</math>-<math>\alpha</math>-<math>\beta</math>. The <math>\alpha</math>-subunits are entirely extracellular. The <math>\beta</math>-subunits each possess an extracellular domain, a single transmembrane domain, and a cytoplasmic tyrosine kinase domain which bears homology with other tyrosine kinases.</p> <p>The epitope recognized by this antibody is localized between amino acid residues 184-283 (exon 3). This antibody shows no cross-reactivity with insulin receptor (IR).</p>
<b>Species Reactivity:</b>	Human. Weakly reacts with rabbit and pig. Non-reactive with rat. Other species were not tested.
<b>Applications:</b>	This antibody acts as a weak IGF-like agonist in bioassays in which stimulation of $^3$ H-thymidine incorporation into DNA is determined. This antibody is also suitable for use in immunoprecipitation and substantially (>80%) inhibits IGF-1 binding.
<b>Suggested Working Dilutions:</b>	For immunoprecipitation, the recommended concentration is 2.0 $\mu$ g/mg protein lysate; and for use as an inhibitor of IGF-1 binding, the recommended concentration is 100 nM (1.5 $\mu$ g/mL). The optimal antibody concentration should be determined for each specific application.
<b>Recommended Positive Control:</b>	Placenta or breast carcinoma.

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

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- Storage:** Store at 2-8°C. 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:**
- Middleton, J., A. Manthey, and J. Tyler (1996) Insulin-like growth factor (IGF) receptor, IGF-I, interleukin-1 beta (IL-1 beta), and IL-6 mRNA expression in osteoarthritic and normal human cartilage. *J. Histochem. Cytochem.* 44:133-141.
- Soos, M.A., C.E. Field, R. Lammers, A. Ullrich, B. Zhang, R.A. Roth, A.S. Andersen, T. Kjeldsen, and K. Siddle (1992) A panel of monoclonal antibodies for the type 1 insulin-like growth factor receptor. Epitope mapping, effects on ligand binding, and biological activity. *J. Biol. Chem.* 267:12955-12963.
- Schumacher, R., M.A. Soos, J. Schlessinger, D. Brandenburg, K. Siddle, and A. Ullrich (1993) Signaling-competent receptor chimeras allow mapping of major insulin receptor binding domain determinants. *J. Biol. Chem.* 268:1087-94.
- Takahashi, M.H., G.A. Thomas, and E.D. Williams (1995) Evidence for mutual interdependence of epithelium and stromal lymphoid cells in a subset of papillary carcinomas. *Br. J. Cancer* 72:813-817.
- Soos, M.A., B.T. Nave, and K. Siddle (1993) Immunological studies of type 1 IGF receptors and insulin receptors: characterization of hybrid and atypical receptor subtypes. *Adv. Exp. Med. Biol.* 343:45-57.

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