

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IGF-II/IGF2 in direct ELISAs and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant human IGF-II/IGF2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse IGF-II/IGF2 Ala25-Glu91 Accession # P09535
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Neutralization	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

IGF-II (Insulin-like growth factor II; also multiplication-stimulating polypeptide/MSP and somatomedin-A) is a secreted 8 kDa polypeptide that belongs to the insulin family of peptide growth factors (1-3). It is part of a complex system of growth and metabolic-regulating proteins that is particularly important during development. It has been associated with nervous system proliferation and differentiation, myelination, adrenal cortical proliferation, and skeletal growth and differentiation (4). In humans, IGF-II is primarily synthesized by the liver and circulates at high levels in both fetus and adult. In rodents, however, IGF-II levels drop after the perinatal period, an effect attributed to the lack of a key gene promoter (2, 5). This may indicate that postnatally, IGF-II has either a limited or local effect only in rodents. For example, evidence suggests IGF-II may be the intermediary for SHH induction of VEGF attendant with local neovascularization (6). Rodent cells known to express IGF-II include astrocytes (7), hepatocytes (8), osteoblasts (9), embryonic striated muscle cells (10, 11), plus Kupffer cells and Ito cells (12). Mouse IGF-II is synthesized as a 180 amino acid (aa) preproprecursor (13). It contains a 24 aa signal sequence, a 67 aa mature region, and an 89 aa C-terminal prodomain that is alternatively referred to as the E-peptide. Mature IGF-II is 91% and 97% aa identical to human and rat IGF-II, respectively. Proper processing of IGF-II requires the chaperone activity of GRP94 (14). This generates an 8 kDa mature form, an 18 kDa, 156 aa proform, and a potential 11 kDa, 88 aa "Big" form (aa 25-112). This 11 kDa "Big" form would be equivalent to human 15-16 kDa IGF-II, with the 5 kDa difference attributable to the presence of O-linked glycosylation (15). There is an additional 34 aa proteolytic fragment that is termed preptin and contains aa 93-126 of the preproprecursor. This is distinct from IGF-II, is secreted by pancreatic B cells, and facilitates insulin secretion (16, 17). IGF-II has multiple binding partners. It binds to IGF-I R, the Insulin receptor (IR)-type A and IGF-IR:IR-A hybrids, the type II IGF receptor (IGF-II R), and IGF binding proteins 1-6 (18, 19). The first three receptors initiate downstream signaling events, the IGF-II R sequesters local IGF-II, and the six IGFBPs regulate IGF-II activity in various tissues.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.