

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IGF-II in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 60% cross-reactivity with recombinant mouse IGF-II and less than 1% cross-reactivity with recombinant human IGF-I is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human IGF-II Ala25-Glu91 Accession # P01344
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

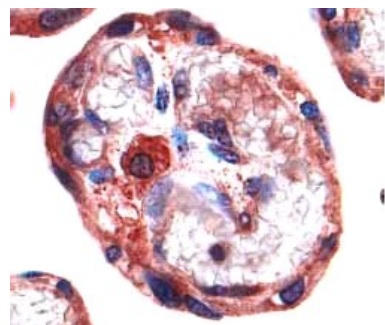
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human IGF-II (Catalog # 292-G2)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize IGF-II-induced proliferation in the MCF-7 human breast cancer cell line [Karey, K.P. <i>et al.</i> (1988) Cancer Research 48 :4083]. The Neutralization Dose (ND ₅₀) is typically 0.2-0.8 µg/mL in the presence of 14 ng/mL Recombinant Human IGF-II.	

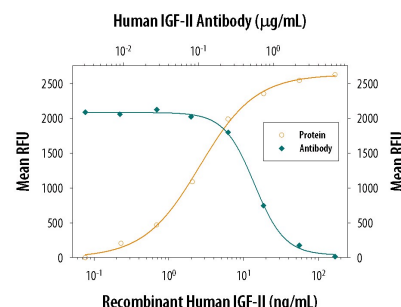
DATA

Immunohistochemistry



IGF-II in Human Placenta. IGF-II was detected in immersion fixed paraffin-embedded sections of human placenta (chorionic villi) using 5 µg/mL Human IGF-II Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-292-NA) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # [CTS013](#)). Tissue was stained with the Anti-Goat HRP-AEC Cell & Tissue Staining Kit (red; Catalog # [CTS009](#)) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Neutralization



Cell Proliferation Induced by IGF-II and Neutralization by Human IGF-II Antibody. Recombinant Human IGF-II (Catalog # [292-G2](#)) stimulates proliferation in the MCF-7 human breast cancer cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IGF-II (14 ng/mL) is neutralized (green line) by increasing concentrations of Human IGF-II Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-292-NA). The ND₅₀ is typically 0.2-0.8 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month from date of receipt, 2 to 8 °C, reconstituted. 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

Insulin-like growth factor I (also known as somatomedin C and somatomedin A) and insulin-like growth factor II (multiplication stimulating activity or MSA) belong to the family of insulin-like growth factors that are structurally homologous to proinsulin. Mature IGF-I and IGF-II share approximately 70% sequence identity. Both IGF-I and IGF-II are expressed in many tissues and cell types and may have autocrine, paracrine and endocrine functions. Mature IGF-I and IGF-II are highly conserved (100% identity between human, bovine, and porcine proteins) and exhibit cross-species activity.

IGF-II is a potent mitogenic growth factor. However, unlike IGF-I which has important postnatal roles, the growth-promoting function of IGF-II is limited to embryonic development.

Two specific cell surface receptors that bind IGF-I and IGF-II have been identified. The type I IGF receptor that participates in IGF signaling is structurally related to the insulin receptor. It is a disulfide-linked heterotetrameric transmembrane glycoprotein with an intracellular tyrosine kinase domain. Type I IGF receptor binds IGF-I with higher affinity than IGF-II. The type II IGF receptor which binds IGF-II with much higher affinity than IGF-I is also the cation-independent mannose 6-phosphate receptor. At the present time, it is not known if the type II IGF receptor participates in the IGF signaling pathway. An additional unknown receptor which mediates IGF-II signaling has also been proposed. Circulating IGFs exist in complexes bound to IGF binding proteins. Currently, at least six high affinity binding proteins have been identified.