

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IGF-I/IGF-1 in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Goat IgG Clone # 40017A
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	E.coli-derived recombinant human IGF-I/IGF-1 Gly49-Ala118 Accession # P05019
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

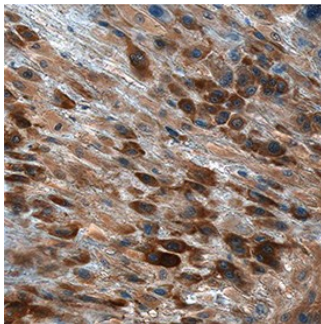
**APPLICATIONS**

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunohistochemistry</b>	3-25 µg/mL	See Below

**DATA**

**Immunohistochemistry**



**IGF-I/IGF-1 in Human Placenta.** IGF-I/IGF-1 was detected in immersion fixed paraffin-embedded sections of human placenta using Goat Anti-Human IGF-I/IGF-1 Recombinant Monoclonal Antibody (Catalog # MAB2911) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in decidual cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

Insulin-like growth factor I, also known as somatomedin C, is the dominant effector of growth hormone and is structurally homologous to proinsulin. Human IGF-I is synthesized as two precursor isoforms with N- and alternate C-terminal propeptides (1). These isoforms are differentially expressed by various tissues (1). The 7.6 kDa mature IGF-I is identical between isoforms and is generated by proteolytic removal of the N- and C-terminal regions. Mature human IGF-I shares 94% and 96% aa sequence identity with mouse and rat IGF-I, respectively (2), and exhibits cross-species activity. It shares 64% aa sequence identity with mature human IGF-II. Circulating IGF-I is produced by hepatocytes, while local IGF-I is produced by many other tissues in which it has paracrine effects (1). IGF-I induces the proliferation, migration, and differentiation of a wide variety of cell types during development and postnatally (3). IGF-I regulates glucose and fatty acid metabolism, steroid hormone activity, and cartilage and bone metabolism (4-7). It plays an important role in muscle regeneration and tumor progression (1, 8). IGF-I binds IGF-I R, IGF-II R, and the insulin receptor, although its effects are mediated primarily by IGF-I R (9). IGF-I association with IGF binding proteins increases its plasma half-life and modulates its interactions with receptors (10).

**References:**

1. Philippou, A. *et al.* (2007) *In Vivo* **21**:45.
2. Sandberg-Nordqvist, A.C. *et al.* (1992) *Brain Res. Mol. Brain Res.* **12**:275.
3. Guvakova, M.A. (2007) *Int. J. Biochem. Cell Biol.* **39**:890.
4. Clemmons, D.R. (2006) *Curr. Opin. Pharmacol.* **6**:620.
5. Bluher, S. *et al.* (2005) *Best Pract. Res. Clin. Endocrinol. Metab.* **19**:577.
6. Garcia-Segura, L.M. *et al.* (2006) *Neuroendocrinology* **84**:275.
7. Malemud, C.J. (2007) *Clin. Chim. Acta* **375**:10.
8. Samani, A.A. *et al.* (2007) *Endocrine Rev.* **28**:20.
9. LeRoith, D. and S. Yakar (2007) *Nat. Clin. Pract. Endocrinol. Metab.* **3**:302.
10. Denley, A. *et al.* (2005) *Cytokine Growth Factor Rev.* **16**:421.

**PRODUCT SPECIFIC NOTICES**

\* Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to SDS for additional information and handling instructions.