

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Reg4 in direct ELISAs and Western blots. In direct ELISAs, approximately 15% cross-reactivity with recombinant mouse (rm) Reg4, rmReg3A, and recombinant rat (rr) Reg3A is observed, less than 5% cross-reactivity with rrReg2 is observed, and less than 1% cross-reactivity with recombinant human (rh) Reg1B, rhReg1A, rmReg1, rmReg2, and rmReg3D is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Reg4 Asp23-Pro158 Accession # Q9BYZ8
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

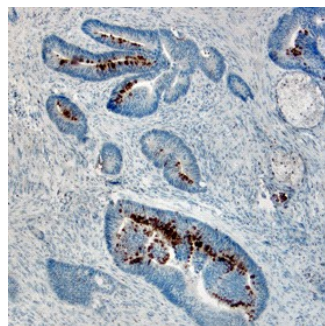
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human Reg4 (Catalog # <a href="#">1379-RG</a> )
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below

## DATA

### Immunohistochemistry



#### Reg4 in Human Colon Cancer Tissue.

Reg4 was detected in immersion fixed paraffin-embedded sections of human colon cancer tissue using Goat Anti-Human Reg4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1379) at 10 µg/mL 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 using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # [CTS008](#)) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 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.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <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

Reg4 (regenerating islet-derived protein 4; also named Reg-like protein, RELP, and gastrointestinal secretory protein) is a 17 kDa, secreted glycoprotein belonging to the calcium (C-type) dependent lectin superfamily and the regenerating gene family (1-3). There are three potential isoforms for human Reg4. Isoform 1 is synthesized as a 158 amino acid (aa) precursor with a 22 aa signal sequence and a 136 aa mature chain. Amino acids 30-156 constitute a C-type lectin-like domain, and amino acid 50 is a site for potential N-linked glycosylation. In addition, amino acids 127 and 142-143 form a ligand-binding surface. In isoform 2, there is a 79 aa substitution for the C-terminal 101 amino acids, while in isoform 3, there is an 11 aa substitution for the C-terminal 57 amino acids. Human Reg4 shares 68% and 67% aa sequence identity with rat and mouse Reg4, respectively. Like other members of the regenerating gene family, Reg4 is expressed in the gastrointestinal (GI) tract and ectopically at other sites in the setting of tissue injury (1, 2). In particular, Reg4 is expressed in normal colon mucosa, and up-regulated in colon adenocarcinoma, pancreatic cancer, gastric adenocarcinoma, inflammatory bowel disease (Crohn's disease and ulcerative colitis), and, outside the GI tract, in prostate adenocarcinoma (2-8). The physiological function of Reg4 is presently unknown, but it may be involved in inflammatory and metaplastic responses of the GI epithelium (3).

## References:

1. Hartupée, J.C. *et al.* (2001) *Biochim. Biophys. Acta* **1518**:287.
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3. Kamarainen, M. *et al.* (2003) *Am. J. Pathol.* **163**:11.
4. Zhang, Y. *et al.* (2003) *Cancer Lett.* **200**:69.
5. Violette, S. *et al.* (2003) *Int. J. Cancer* **103**:185.
6. Oue, N. *et al.* (2005) *J. Pathol.* **207**:185.
7. Zhennan, G. *et al.* (2005) *Clin. Cancer Res.* **2**:2237
8. Bishnupuri, K.S. *et al.* (2006) *Gastroenterology* **130**:137.