

**REG4 Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	14	Rabbit	#Q9BYZ8	83998

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

REG4 Antibody recognizes endogenous levels of total human REG4 protein. REG4 antibody may weakly bind mouse Reg4.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human REG4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

Reg4 (regenerating islet-derived protein 4) is a member of a multigene family of Reg proteins (1). Reg proteins are secreted glycoproteins belonging to the calcium (C-type) dependent lectin superfamily, although they can in fact bind polysaccharides, mannan, and heparin in the absence of calcium (2,3). Reg4 is expressed in the gastrointestinal (GI) tract, in normal colon mucosa, and is upregulated in colon adenocarcinoma, pancreatic cancer, gastric adenocarcinoma, and inflammatory bowel disease (Crohn's disease and ulcerative colitis) (4,5).

It has recently been shown that Reg4 marks a population of deep secretory cells at the bottom of the crypts in the colon. In the upper gastrointestinal tract, Paneth cells support the Lgr5+ positive stem cells that reside at the base of deep crypts by providing signals such as Wnt3, EGF, and Notch ligands for stem cell maintenance. No Paneth cells, however, exist in the colon crypts. It is proposed that the Reg4+ population serves as an analogous support system for the LGR5+ positive stem cell population in the colon (1,6).

**Background References**

- Hartupee, J.C. et al. (2001) *Biochim Biophys Acta* 1518, 287-93.
- Kämäräinen, M. et al. (2003) *Am J Pathol* 163, 11-20.
- Ho, M.R. et al. (2010) *J Mol Biol* 402, 682-95.
- Violette, S. et al. (2003) *Int J Cancer* 103, 185-93.
- Zhang, Y.W. et al. (2003) *World J Gastroenterol* 9, 2635-41.
- Sasaki, N. et al. (2016) *Proc Natl Acad Sci U S A* 113, E5399-407.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human

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