

Regucalcin/SMP30 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 M R Mk	Endogenous	33	Rabbit	#Q15493	9104

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

Regucalcin/SMP30 Antibody recognizes endogenous levels of total regucalcin/SMP30 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human regucalcin/SMP30 protein. Antibodies are purified by peptide affinity chromatography.

Background

Regucalcin is a highly conserved, multifunctional protein encoded by the *RGN* gene on the X chromosome, generally recognized as a calcium (Ca²⁺) binding protein involved in the maintenance of intracellular Ca²⁺ homeostasis (1). The protein was independently identified and termed Senescence Marker Protein-30 (SMP30), following the observation in a rat aging model that expression of the protein markedly declined with age in a hormone-independent manner (2). Regucalcin/SMP30 has since been implicated in the regulatory control of many fundamental biological processes (e.g., cell growth, apoptosis, cellular metabolism), largely through its role in regulating Ca²⁺ homeostasis and Ca²⁺-dependent signal transduction (3-5). Research studies also suggest that regucalcin/SMP30 may function as a tumor suppressor in some contexts (3,6), while serum levels of regucalcin/SMP30 have also been proposed as potential biomarkers of liver and kidney dysfunction (7).

Background References

1. Yamaguchi, M. et al. (1989) *Chem Pharm Bull (Tokyo)* 37, 388-90.
2. Fujita, T. et al. (1992) *Biochim Biophys Acta* 1116, 122-8.
3. Vaz, C.V. et al. (2016) *Curr Mol Med* 16, 607-19.
4. Yamaguchi, M. and Murata, T. (2013) *Metabolism* 62, 1045-51.
5. Yamaguchi, M. (2013) *Apoptosis* 18, 1145-53.
6. Yamaguchi, M. et al. (2017) *Mol Cell Biochem* 430, 37-46.
7. Yamaguchi, M. (2014) *Mol Cell Biochem* 391, 157-66.

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 **M:** Mouse **R:** Rat **Mk:** Monkey

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