

## Product Information

### Anti-Tensin 1 (internal)

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200298**

#### Product Description

Anti-Tensin 1 (internal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence located in the internal region of human tensin1 (GenelD: 7145), conjugated to KLH. The corresponding sequence is identical in rat and mouse tensin1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Tensin 1 specifically recognizes human and rat tensin1. The antibody may be used in several immunochemical techniques including immunoblotting (human ~150 kDa, rat 225 kDa). Detection of the tensin1 band by immunoblotting is specifically inhibited by the tensin1 immunizing peptide.

Tensins are a new family of focal adhesion proteins that link between the extracellular matrix (ECM) and the cytoskeleton via integrins, and thus are thought to play an important role in regulating cell shape and motility. The tensin family includes four members: tensin1-4, encoded by different genes.<sup>1,2</sup> Tensins are multidomain proteins consisting of homologous C1, PTPase, C2, SH2 and PTB domains. Tensin 1 (also known as TNS1), shares extensive homology with tensin 2 and tensin 3 at its N- and C-terminal regions. Tensin 1 mRNA is broadly expressed in mouse embryo and various human tissues and is localized to focal adhesions.<sup>2,3</sup> The N-terminal of tensin 1 binds to F-actin, whereas the centre region retards G-actin polymerization. Tensin 1 PTB domain binds the cytoplasmic tail of  $\beta$ -integrin, the SH2 domain binds FAK, p130Cas and DLC-1, and its PTPase domain binds the protein phosphatase PP1 $\alpha$ .<sup>3,4</sup> The association between tensin 1 and these partners affects cell polarization, migration and invasion. Tensin 1 undergoes extensive Ser/Thr and Tyr phosphorylation induced by ECM, various growth factors and oncogenes.<sup>5</sup> In addition, tensin 1 is cleaved by calpain II, a focal adhesion protease, suggesting that tensin 1 plays important roles in organizing the actin cytoskeleton and mediating signal transduction.

#### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.5 mg/mL

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

#### Product Profile

**Immunoblotting:** a working concentration of 1.5-3  $\mu$ g/mL is recommended using lysates of A10 cells; a working concentration of 1-2  $\mu$ g/mL is recommended using HEK-293T cells overexpressing human tensin1.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

#### References

1. Hafizi, S., et al., *Biochem. Biophys. Res. Commun.*, **299**, 793-800 (2002).
2. Chen, H., et al., *Proc. Natl. Acad. Sci. USA*, **99**, 733-738 (2002).
3. Chen, H., et al., *Biochem. J.*, **370**, 1039-1045 (2003).
4. Eto, M., et al., *J. Biol. Chem.*, **282**, 17806-17815 (2007).
5. Hall, H., et al., *Mol. Cell. Proteomics*, **9**, 2853-2863 (2010).

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