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Product Information

Anti-Tensin 3 (N-terminal region)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200296**

Product Description

Anti-Tensin 3 (N-terminal region) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence located within the N-terminal region of human tensin 3 (GeneID: 64759), conjugated to KLH. The corresponding sequence is highly conserved in mouse and rat tensin 3 (88% and 83% sequence identity, respectively). The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Tensin 3 (N-terminal region) specifically recognizes human, rat and mouse tensin 3. The antibody may be used in several immunochemical techniques including immunoblotting (human ~180 kDa, rat and mouse ~150 kDa). Detection of the tensin 3 band by immunoblotting is specifically inhibited by the tensin 3 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, tensin 1-4, encoded by different genes.[1,2] Tensins are multidomain proteins consisting of homologous C1, PTPase, C2, SH2 and PTB domains. Tensin 3 (also known as TNS3, TEM6), shares extensive homology with tensin 1 at its N- and C-terminals, including the actin-binding domain, the SH2 and PTB domains. Tensin 3 is expressed in various tissues such as thyroid, kidney and placenta and in different cell types including endothelial and epithelial cells, and fibroblasts. Tensin 3 has been suggested to play a potential role in EGF-induced signaling pathway at focal adhesions.[3] EGF modulates tyrosine phosphorylation of tensin 3, leading to dissociation of the tensin3-FAK-p130CAS complex and enhanced interaction between tensin 3 and EGF receptor.[3] EGF has been shown to downregulate tensin 3 expression and to upregulate cten in mammary cancer cells.[4] Knockdown of tensin 3 or cten, enhances or impairs mammary cell migration, respectively. Tensin 3 has been shown to contribute to cell migration and tumorigenesis in cell lines from advanced lung cancer, breast cancer and melanoma. In these cell lines, tensin 3 is phosphorylated by Src in its SH2 domain, leading to tumorigenesis and metastasis, implicating tensin 3 as an oncoprotein regulated by Src.[5]

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 1.5-3.0 μg/mL is recommended using lysates of NIH3T3 and NRK cells;
a working concentration 1-2 μg/mL is recommended using HEK-293T cell lysates over-expressing human tensin 3.

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. Cui, Y., et al., *Mol. Cancer Res.,* **2**, 225-232 (2004).
4. Katz, M., et al., *Nature Cell Biol.,* **9**, 961-969 (2007).
5. Qian, X., et al., *Cancer Cell,* **16**, 246-258 (2009).

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