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Product Information

Anti-Tensin 2
produced in rabbit, affinity isolated antibody

Product Number **SAB4200161**

Product Description

Anti-Tensin 2 is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human tensin 2 (GeneID: 23371), conjugated to KLH. The corresponding sequence is identical in rat and mouse tensin 2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Tensin 2 specifically recognizes human tensin 2. The antibody may be used in several immunochemical techniques including immunoblotting (~160 kDa). Detection of the tensin 2 band by immunoblotting is specifically inhibited by the tensin2 immunizing peptide.

Tensins are a 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 2 (also known as TENC1, C1TEN), shares extensive homology with tensin1 at its N- and C-terminus, including the actin-binding domain, the SH2 and PTB domains. Tensin 2 has been shown to be a binding partner for Axl receptor tyrosine kinase.[1] Tensin 2 mRNA is highly expressed in heart, kidney, skeletal muscle, and liver.[2]

Dysregulation of expression of tensins has been implicated in various forms of human cancers. Expression of tensin 2 and tensin 3 are markedly reduced in a panel of diverse human cancer cell lines, and all four genes are downregulated in human kidney cancer.[3] Introduction of tensin 2 in heptocellular carcinoma (HCC) cell lines with low expression of tensin 2, caused significant growth inhibition and apoptosis.[4] Tensin 2 has been shown to interact directly with DLC1, a recently identified RhoGAP tumor suppressor protein frequently deleted and underexpressed in HCC cell lines and other types of cancers. Tensin 2 may be important for normal kidney function in vivo, as shown in a mouse model of nephrotic syndrome.[5]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative and 1% BSA.

Antibody concentration: ~0.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at −20 °C. For continuous use, the product may be stored at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at −20 °C. 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 antibody concentration of 0.5-1.0 μg/mL is recommended using HEK-293T cell lysates overexpressing human tensin 2.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine 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. Martuszewska, D., et al., *PloS One,* **4**, e4350 (2009). doi :10.1371/journal.pone.0004350
4. Yam, J.W., et al., *Cancer Res.,* **66**, 8367-8372 (2006).
5. Kato, T., et al., *Biomed. Res.,* **29**, 279-287 (2008).

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