

Product Information

Anti-Tensin 3 Antibody, Mouse Monoclonal

Clone TN-17, Purified from Hybridoma Cell Culture

SAB4200416

Product Description

Anti-Tensin 3 (mouse IgG1 isotype) is derived from the hybridoma TN-17 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to an internal sequence of human Tensin 3 (GeneID: 64759) conjugated to KLH. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Cat. No. ISO2). The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-Tensin 3 recognizes human and monkey Tensin 3. The antibody may be used in various immunochemical techniques including immunoblotting (~ 170 kDa) and immunofluorescence. Staining of the Tensin 3 band in immunoblotting is specifically inhibited by the 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 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, 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 tensin 3-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, respectively, enhances or impairs mammary cell migration.

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 as a preservative.

Antibody Concentration: ~ 1.0 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

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze at -20 °C 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 dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting

A working concentration of 0.5-1.0 µg/mL is recommended using extracts of SW-620 cells.

Immunofluorescence

A working concentration of 2.5-5.0 µg/mL is recommended using PC3 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining 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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