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Product Information

Anti-TRIM2
produced in rabbit, affinity isolated antibody

Product Number **SAB4200206**

Product Description

Anti-TRIM2 is produced in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human TRIM2 (GeneID: 23321), conjugated to KLH. The corresponding sequence is identical in mouse and rat TRIM2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-TRIM2 specifically recognizes human and rat TRIM2. Applications include the detection of TRIM2 by immunoblotting (~85 kDa). An additional band of ~78 kDa corresponding to an alternatively spliced TRIM2 form is observed. Detection of the TRIM2 band by immunoblotting is specifically inhibited by the TRIM2 immunizing peptide.

TRIM RING finger proteins play an important role in cancerogenesis, in pathogenesis of some human hereditary disorders, and in defense against viral infection; however, the function of the majority of TRIM proteins remains unknown.[1] TRIM RING finger proteins contain a conserved modular structure, including a RING finger, B-box coiled-coil domains. Some members of the TRIM family have been identified as ubiquitin ligases. Mutations in the RING finger protein Parkin have been shown to trigger a juvenile form of Parkinson's disease (PD), and translocation of the TRIM gene *pml* has been identified in patients suffering from acute promyelocytic leukemia.[2,3] TRIM2, (also known as RNF86, Narf) is highly expressed in the nervous system. TRIM2 has been linked to neuronal activity, its expression in hippocampus correlating with the activity of NMDA receptor.[4] TRIM2 has been shown to interact with the unconventional motor protein myosin V and to function as a UbcH5a-dependent ubiquitin ligase.[5] It binds to neurofilament light subunit (NF-L) and regulates NF-L ubiquitination. Additionally, knockout of the *TRIM2* gene in mouse leads to accumulation of NF-L in axons and NF-L-filled axonal swellings in cerebellum, retina, spinal cord and cerebral cortex. The axonopathy is followed by progressive neurodegeneration accompanied by juvenile-onset tremor and ataxia, indicating that TRIM2 plays an important role in regulating NF-L metabolism.

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

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 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 1.5-3.0 μg/mL is recommended using rat spinal cord extracts (S1 fraction) and HEK-293T cell lysates overexpressing human TRIM2.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Reymond, A., et al., *EMBO J.,* **20**, 2140-2151 (2001).
2. de The, H., et al., *Cell,* **66**, 675-685 (1995).
3. Shimura, H., et al., *Nature Genet.,* **25**, 302-305 (2000).
4. Ohkawa, N., et al., *J. Neurochem.,* **78**, 75-87 (2001).
5. Balastik, M., et al., *Proc. Natl. Acad. Sci. USA*, **105**, 12016-12021 (2008).

VS,ER,RC,KAA,PHC,MAM 07/19-1