SIGMA-ALDRICH®

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Product Information

Anti-C9orf72 antibody produced in rabbit
affinity isolated antibody

Catalog Number **SAB4200623**

Product Description

Anti-C9orf72 is produced in rabbit using as immunogen a synthetic peptide corresponding to the N-terminal region of human C9orf72 (GeneID: 203228), conjugated to KLH. The corresponding sequence differs by a single amino acid in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-C9orf72 recognizes human C9orf72. The antibody may be used in various immunochemical techniques including immunoblotting (~55 kDa), immunocytochemistry and immunohistochemistry. Detection of the C9orf72 band by immunoblotting is specifically inhibited by the immunizing peptide.

C9orf72 also known as FTDALS or ALSFTD (Frontotemporal Dementia and/or Amyotrophic Lateral Sclerosis), was recently found to be involved in both of these fatal neurodegenerative diseases. An expanded hexanucleotide (GGGGCC) repeat in the first intron of C9orf72 was reported as the most common cause of familial FTD and ALS identified to date. The repeat expansion leads to the loss of one alternatively spliced C9orf72 transcript and to formation of nuclear RNA foci, suggesting multiple disease mechanisms.[1-3] Furthermore, reports suggested a mechanism of sense and antisense *C9orf72* repeat RNA foci that cause repeat-associated non-ATG (RAN) translation, leading to the formation of neuronal inclusions containing RAN toxic protein products generated from sense transcripts.[4]

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

This product is 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. Repeated freezing and thawing 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 0.3-0.6 μg/mL is recommended using whole extracts of T98G cells.

Immunocytochemistry: a working concentration of 4-6 μg/mL is recommended using SH-SY-5Y cells.

Immunohistochemistry: a working concentration of 10 μg/mL is recommended using heat-retrieved formalin-fixed, paraffin-embedded human colon sections.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. DeJesus-Hernandez, M., et al., *Neuron*, **72**, 245–256 (2011).
2. Renton, A.E., et al., *Neuron*, **72**, 257–268 (2011).
3. Majounie, E., et al., *Lancet Neurol.*, **11**, 323-30 (2012).
4. Cleary, J.D., and Ranum, L.P., *Hum. Mol. Genet.,* **22(R1)**, R45-R51 (2013).

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