

Product Information

Anti-FUS (internal region)

produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200511**

Product Description

Anti-FUS (internal region) is produced in rabbit using as immunogen a peptide corresponding to an internal region of human FUS (GeneID: 2521), conjugated to KLH. The corresponding sequence is identical in monkey and differs by 4 amino acids in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-FUS (internal region) recognizes human FUS. The antibody may be used in various immunochemical techniques including immunoblotting (~70 kDa) and immunofluorescence. Detection of the FUS band by immunoblotting is specifically inhibited by the immunizing peptide.

FUS (fused in sarcoma, also known as TLS, RNP-P2, ALS6) is a RNA/DNA binding protein that plays regulatory roles in transcription, RNA splicing and transport and is implicated in multiple diseases.^{1,2} Chromosomal translocation of FUS/TLS is found in human cancers and results in the production of oncogenic FUS fusion proteins. Recently, FUS has been implicated in a broadening spectrum of neurodegenerative disorders.² FUS has been identified as a component of inclusion bodies in patients with Huntington's disease (HD) and spinocerebellar ataxias (SCA1-3). More recently, mutations in TDP-43 and FUS have been identified in amyotrophic lateral sclerosis (ALS) and fronto-temporal lobar degeneration (FTLD) including ubiquitin-positive inclusions (FTLD-U).^{2,4} Although FUS is normally located predominantly in the nucleus, pathological FUS inclusions are mostly found in the cytosol of neurons and glia cells.^{2,5} The majority of the FUS mutations have been identified in C-terminal nuclear localization signal (NLS). It has been proposed that age-related decline in nuclear import mechanisms, in combination with cellular stress and genetic risk factors, may be a central underlying cause of ALS and FTLD pathology.⁴

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.

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 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 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 whole extracts of human HEK-293T or G361 cells.

Immunofluorescence: a working concentration of 2.5-5 µg/mL is recommended using human HepG2 or MCF7 cells.

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

References

1. Zinszner, H., et al., *J. Cell Sci.*, **110**, 1741-1750 (1997).
2. Lagier-Tourenne, C., et al., *Hum. Mol. Genet.*, **19**, R46-R64 (2010).
3. Vance, C., et al., *Science*, **323**, 1208-1211 (2009).
4. Dormann, D., and Haass, C., et al., *Trends Neurosci.*, **34**, 339-348 (2011).
5. Kino, Y., et al., *Nucl. Acid Res.*, **39**, 2781-2798 (2011).

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