## Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-TLS/FUS antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit polyclonal to TLS/FUS</td>
</tr>
<tr>
<td>Host species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Tested applications</td>
<td>Suitable for: IHC-P, WB, ICC/IF</td>
</tr>
</tbody>
</table>

### Species reactivity

- **Reacts with:** Mouse, Human
- **Predicted to work with:** Rat, Rabbit, Cow, Dog, Pig, Chimpanzee, Rhesus monkey, Gorilla, Orangutan, Bat, Elephant

### Immunogen

Synthetic peptide, corresponding to a region within the amino acids 1-50 of Human TLS/FUS (SwissProt: P35637).

### Positive control

- Human ovarian carcinoma tissue. Mouse squamous cell carcinoma tissue.

### General notes

Concentration is optimized for IHC and not determined

## Properties

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage instructions</td>
<td>Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline</td>
</tr>
<tr>
<td>Purity</td>
<td>Immunogen affinity purified</td>
</tr>
<tr>
<td>Clonality</td>
<td>Polyclonal</td>
</tr>
<tr>
<td>Isotype</td>
<td>IgG</td>
</tr>
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</table>

## Applications

Our **Abpromise guarantee** covers the use of **ab84078** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>IHC-P</td>
<td>★★★★★</td>
<td>1/100 - 1/500.</td>
</tr>
</tbody>
</table>
### Function
Binds both single-stranded and double-stranded DNA and promotes ATP-independent annealing of complementary single-stranded DNAs and D-loop formation in superhelical double-stranded DNA. May play a role in maintenance of genomic integrity.

### Tissue specificity
Ubiquitous.

### Involvement in disease
- **Note:** A chromosomal aberration involving FUS is found in a patient with malignant myxoid liposarcoma. Translocation t(12;16)(q13;p11) with DDIT3.
- **Note:** A chromosomal aberration involving FUS is a cause of acute myeloid leukemia (AML). Translocation t(16;21)(p11;q22) with ERG.
- Defects in FUS may be a cause of angiomatoid fibrous histiocytoma (AFH) [MIM:612160]. A distinct variant of malignant fibrous histiocytoma that typically occurs in children and adolescents and is manifest by nodular subcutaneous growth. Characteristic microscopic features include lobulated sheets of histiocyte-like cells intimately associated with areas of hemorrhage and cystic pseudovascular spaces, as well as a striking cuffing of inflammatory cells, mimicking a lymph node metastasis. **Note:** A chromosomal aberration involving FUS is found in a patient with angiomatoid fibrous histiocytoma. Translocation t(12;16)(q13;p11.2) with ATF1 generates a chimeric FUS/ATF1 protein.
- Defects in FUS are the cause of amyotrophic lateral sclerosis type 6 (ALS6) [MIM:608030]. ALS6 is a familial form of amyotrophic lateral sclerosis. ALS is a neurodegenerative disorder affecting upper motor neurons in the brain and lower motor neurons in the brain stem and spinal cord, resulting in fatal paralysis. Sensory abnormalities are absent. Death usually occurs within 2 to 5 years. The etiology of amyotrophic lateral sclerosis is likely to be multifactorial, involving both genetic and environmental factors. The disease is inherited in 5-10%.

### Sequence similarities
Belongs to the RRM TET family.
- Contains 1 RanBP2-type zinc finger.
- Contains 1 RRM (RNA recognition motif) domain.

### Post-translational modifications
Arg-216 and Arg-218 are dimethylated, probably to asymmetric dimethylarginine.

### Cellular localization
Nucleus.

### Images

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<tr>
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<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 74 kDa (predicted molecular weight: 75 kDa).</td>
<td></td>
</tr>
<tr>
<td>ICC/IF</td>
<td>1/500. (see abreview).</td>
<td></td>
</tr>
</tbody>
</table>
Western blot - Anti-TLS/FUS antibody (ab84078)

All lanes: Anti-TLS/FUS antibody (ab84078) at 1/500 dilution

Lane 1: HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2: Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate
Lane 3: HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate
Lane 4: SHSY-5Y (Human neuroblastoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes: Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 75 kDa
Observed band size: 74 kDa

why is the actual band size different from the predicted?

Exposure time: 1 minute
Immunocytochemistry/Immunofluorescence - Anti-TLS/FUS antibody (ab84078)

This image is courtesy of an Abreview submitted by Dr. Isabelle Virard

ab84078 staining TLS/FUS in embryonic mouse motor neuron culture at 5 DIV by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with formaldehyde, permeabilized with 0.5% Triton in PBS for 15 minutes and blocked with 4% BSA/4% serum for 1 hour at 20°C. Samples were incubated with primary antibody (1/500: 4% BSA; 4% serum in PBS 0.1% Triton) for 16 hours at 4°C. A Cy3®-conjugated-Goat polyclonal to rabbit IgG, dilution 1/1000, was used as secondary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TLS/FUS antibody (ab84078)

This image is courtesy of an Abreview submitted by Jim Manavis

ab84078 staining TLS/FUS in Human brain tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% serum for 30 minutes at room temperature; antigen retrieval was by heat mediation with a citrate buffer. Samples were incubated with primary antibody (1/2000 in horse serum) for 12 hours. A Streptavidin-conjugated Horse anti-rabbit monoclonal (1/250) was used as the secondary antibody.

Please note: All products are “FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES”

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