

PRODUCT DATASHEET

Anti-SARM1 Antibody

Overview

Catalog #	77-522 (100 µL size) or 77-522-020 (20 µL size)
Conjugate	Unconjugated
Isotype	IgG2b
Clone Number	6174-11
Concentration	1 mg/mL
Host Species	Mouse Monoclonal
Format	Purified by Protein A chromatography
Buffer	10 mM Tris, 50 mM Sodium Chloride, 0.065% Sodium Azide pH 7.4
Applications	ICC, IHC, WB
Species Reactivity	Human, Mouse, and Rat
Immunogen	Fusion protein amino acids 51-724 of human SARM1 (accession number Q6SZW1) produced recombinantly in E. Coli.
Molecular Weight	73 kDa
Cite this Antibody	Pel-Freez Biologicals Cat# 77-522, RRID: AB_2938811

Details

Target Description

SARM1 (Sterile Alpha and TIR Motif-Containing 1) is predominantly expressed in the nervous system, particularly in neurons, and is highly conserved across different species. It encodes a protein that contains several functional domains, including a sterile alpha motif (SAM) domain, a Toll/interleukin-1 receptor (TIR) domain, and a catalytic domain with NAD⁺ hydrolase activity. SARM1 activation triggers a cascade of molecular events that leads to the breakdown of axonal structures and eventual degeneration. In response to injury, SARM1 is activated and catalyzes cleavage of NAD⁺ into ADP-D-ribose (ADPR), cyclic ADPR (cADPR) and nicotinamide. In the nervous system, NAD⁺ depletion is a critical step in the axonal degeneration process, known as Wallerian degeneration, and is essential for clearing damaged axons to allow for regeneration and repair. Inhibition of SARM1 or the preservation of NAD⁺ levels has been shown to protect axons from degeneration in experimental models, suggesting SARM1 as a potential therapeutic target for neurodegenerative diseases and nerve injuries. Research on SARM1 has primarily focused on its role in axonal degeneration and neuroprotection. Understanding the molecular mechanisms underlying SARM1 activation and its downstream effects may have implications for developing treatments for various neurological disorders, such as peripheral neuropathies, traumatic brain injury, and neurodegenerative diseases like Parkinson's and Alzheimer's.

Specificity	No cross-reactivity reported
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Purification Method	Produced by in vitro bioreactor culture of hybridoma line followed by Protein A affinity chromatography. Purified mAbs are >90% specific antibody.
Quality Control Tests	Each new lot of antibody is quality control tested by western blot on rat whole brain lysate and confirmed to stain the expected molecular weight band.
Storage	Aliquot and store at $\leq -20^{\circ}\text{C}$ for long term storage. For short term storage, store at $2-8^{\circ}\text{C}$. For maximum recovery of product, centrifuge the vial prior to removing the cap.

Our Guarantee

As an original manufacturer, we are dedicated to creating quality and reproducible antibodies that further your research. We provide personalized customer support from the scientists that made the antibody and offer a free replacement or 100% refund if we cannot resolve an issue. Order today and experience our 50+ year passion for science.

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Figure Notes

Left pane - Western blotting of rat, human, or mouse brain Sagittal section of formalin-fixed, paraffin-embedded rat brain showing homogenate (20 ug/lane) and transfected COS7 cell lysates strong staining for SARM1 in the Purkinje layer of the cerebellum as

(5 ug/ml) with Pel-Freez Biologicals mouse anti-SARM1 expected. Inset image shows higher magnification. Sections were stained antibody (clone 6174-11). Overexpressed SARM1 in lane 4 with Pel-Freez Biologicals mouse anti-SARM1 (clone 6174-11) runs higher due to dual MYC-FLAG tag. Right pane- Western antibody at 1:500 dilution and detected with anti-mouse HRP.

blotting of same lysates with Pel-Freez Biologicals anti-GRP75 antibody (clone N52A/42) as loading control.

Immunofluorescent staining of COS-7 cells expressing SARM1-flag using Antibodies

Incorporated mouse anti-SARM1 clone 6174-11 (green) and rabbit anti-flag (red). DAPI nuclear stain (blue) showing nuclei of both transfected and untransfected cells. Staining shows 100% correspondence between mouse anti-SARM1 signal and anti-flag in transfected cells.

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