

Basic Information

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| Product Name | Anti-ARSA Antibody (Clone#4C10) | |
| Gene Name | ARSA | |
| Source | Mouse | |
| Isotype | IgG2a | |
| Species Reactivity | human, mouse, rat | |
| Tested Application | WB, IHC, FCM | |
| Contents | 500 ug/ml antibody with PBS , 0.02% NaN ₃ , 1 mg BSA and 50% glycerol. | |
| Immunogen | A synthetic peptide corresponding to a sequence at the C-terminus of human ARSA (454-482aa QALKQLLLKAQLDAAVTFGPSQVARGED), different from the related mouse sequence by six amino acids. | |
| concentration | 500 ug/ml | |
| Purification | protein G purified. | |
| Observed MW | 54KD | |
| Dilution Ratios | Western blot(WB): 1:500-2000 Immunohistochemistry in paraffin section (IHC): 1:50-400 Flow cytometry (FCM): 1-3 µg/1x10 ⁶ cells (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user. | |

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

Arylsulfatase A (ARSA) is an enzyme that breaks down sulfatides, namely cerebroside 3-sulfate into cerebroside and sulfate. In humans, arylsulfatase A is encoded by the ARSA gene. ARSA is mapped to 22q13.33. The protein encoded by this gene hydrolyzes cerebroside sulfate to cerebroside and sulfate. Defects in this gene lead to metachromatic leucodystrophy (MLD), a progressive demyelination disease which results in a variety of neurological symptoms and ultimately death. Alternatively spliced transcript variants have been described for this gene.

Selected Validation Data

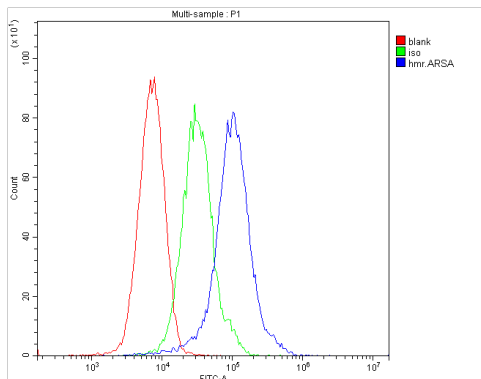


Figure 1. Flow Cytometry analysis of ANA-1 cells using anti-ARSA antibody (M02583). Overlay histogram showing ANA-1 cells stained with M02583 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-ARSA Antibody (M02583, $1\mu\text{g}/1\times 10^6$ cells) for 30 min at 20°C . DyLight488 conjugated goat anti-mouse IgG (BA1126, $5-10\mu\text{g}/1\times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C . Isotype control antibody (Green line) was mouse IgG ($1\mu\text{g}/1\times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

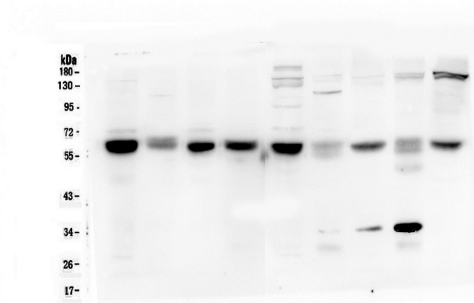


Figure 2. Western blot analysis of ARSA using anti-ARSA antibody (M02583). Electrophoresis was performed on a 10% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: rat testis tissue lysate,

Lane 2: rat liver tissue lysate,

Lane 3: rat brain tissue lysate,

Lane 4: rat lung tissue lysate,

Lane 5: mouse testis tissue lysate,

Lane 6: mouse liver tissue lysate,

Lane 7: mouse brain tissue lysate,

Lane 8: mouse lung tissue lysate,

Lane 9: mouse HEPA1-6 whole cell lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-ARSA antigen affinity purified monoclonal antibody (Catalog # M02583) at $0.5\mu\text{g}/\text{mL}$ overnight at 4°C , then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system.

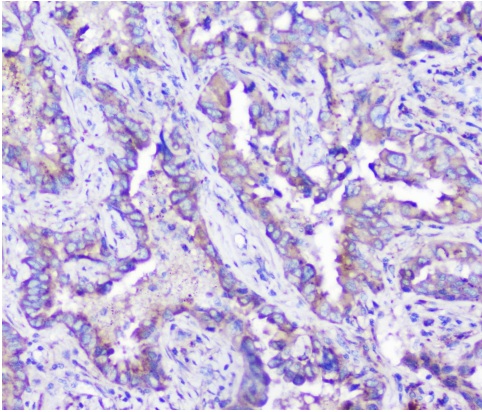


Figure 5. IHC analysis of ARSA using anti-ARSA antibody (M02583). ARSA was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml mouse anti-ARSA Antibody (M02583) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.