Arylsulfatase A / ARSA Antibody, Rabbit MAb

Catalog Number: 10449-R012

Preparation
This antibody was obtained from a rabbit immunized with purified, recombinant Human Arylsulfatase A / ARSA (rh Arylsulfatase A / ARSA; Catalog#10449-H08H; NP_000478.2; Met 1-Ala 507).

Applications
Direct ELISA – This antibody can be used at 0.5-1 μg/mL with the appropriate secondary reagents to detect Human ARSA. The detection limit for Human ARSA is approximately 0.039 ng/well.

Specificity
Human Arylsulfatase A / ARSA Has cross-reactivity in ELISA with Mouse ARSA

Storage
This antibody can be stored at 2℃-8℃ for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20℃ to -80℃. Preservative-Free.

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

Background
Arylsulfatase A (ARSA) is synthesized as a 52KDa lysosomal enzyme. It is a member of the sulfatase family that is required for the lysosomal degradation of cerebroside-3-sulfate, a sphingolipid sulfate ester and a major constituent of the myelin sheet. Arylsulfatase A is activated by a required co- or posttranslational modification with the oxidation of cysteine to formylglycine. Metachromatic leukodystrophy (MLD) is a lysosomal storage disease in the central and peripheral nervous systems with severe and progressive neurological symptoms caused by the deficiency of Arylsulfatase A. Deficiency of this enzyme is also found in apparently healthy individuals, a condition for which the term pseudodeficiency is introduced. ARSA forms dimers after receiving three N-linked oligosaccharides in the endoplasmic reticulum, and then the dimers are transported to the Golgi where they receive mannose 6-phosphate recognition markers. And thus, ARSA is transported and delivered to dense lysosomes in a mannose 6-phosphate receptor-dependent manner. It has been shown that within the lysosomes, the ARSA dimers can oligomerize to an octamer in a pH-dependent manner. The ARSA deficiency leads to metachromatic leukodystrophy (MLD), a lysosomal storage disorder associated with severe and progressive demyelination in the central and peripheral nervous system. Additionally, the serum level of arylsulfatase A might be helpful in diagnosis of lung and central nervous system cancer.

Reference