

## Basic Information

Product Name	Anti-AlaRS/AARS1 Antibody		
Gene Name	AARS1		
Source	Rabbit		
Clonality	Polyclonal		
Isotype	IgG		
Species Reactivity	human		
Tested Application	WB, FCM, ICC/IF, ELISA		
Contents	500 ug/ml antibody with PBS, 0.02% NaN <sub>3</sub> , 1 mg/ml BSA and 50% glycerol.		
Immunogen	E.coli-derived human AlaRS/AARS1 recombinant protein (Position: R729-N968).		
Concentration	500 ug/ml		
Purification	Immunogen affinity purified.		
Observed MW	107 kDa		
Dilution Ratios	Western blot (WB):	1:500-2000	
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:50-400	
	Flow Cytometry (Fixed):	1:50-200	
	Enzyme linked immunosorbent assay (ELISA):	1:100-1000	

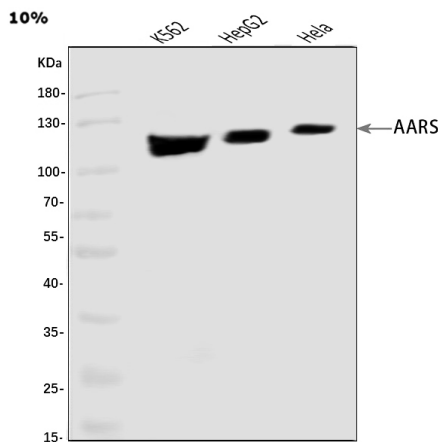
## Storage

12 months from date of receipt, -20°C as supplied.

## Background Information

An aminoacyl-tRNA synthetase (aaRS or ARS), also called tRNA-ligase, is an enzyme that attaches the appropriate amino acid onto its corresponding tRNA. The human alanyl-tRNA synthetase (AARS) belongs to a family of tRNA synthases, of the class II enzymes. Class II tRNA synthases evolved early in evolution and are highly conserved. This is reflected by the fact that 498 of the 968-residue polypeptide human AARS shares 41% identity with the E.coli protein. tRNA synthases are the enzymes that interpret the RNA code and attach specific amino acids to the tRNAs that contain the cognate trinucleotide anticodons. They consist of a catalytic domain which interacts with the amino acid acceptor-T psi C helix of the tRNA, and a second domain which interacts with the rest of the tRNA structure.

## Selected Validation Data



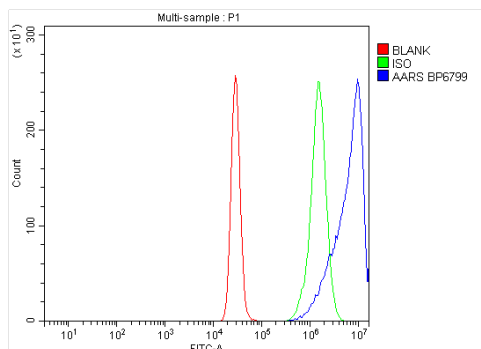
Western blot analysis of AlaRS/AARS1 using anti-AlaRS/AARS1 antibody (A03935-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: K562 whole cell lysates,

Lane 2: HepG2 whole cell lysates,

Lane 3: Hela whole cell lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-AlaRS/AARS1 antigen affinity purified polyclonal antibody (A03935-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for AlaRS/AARS1 at approximately 107 kDa. The expected band size for AlaRS/AARS1 is at 107 kDa.



Flow Cytometry analysis of K562 cells using anti-AlaRS/AARS1 antibody (A03935-1).

Overlay histogram showing K562 cells stained with A03935-1 (Blue line).

To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-AlaRS/AARS1 Antibody (A03935-1) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IF analysis of AlaRS/AARS1 using anti-AlaRS/AARS1 antibody (A03935-1). AlaRS/AARS1 was detected in an immunocytochemical section of MCF-7 cells. The section was incubated with rabbit anti-AlaRS/AARS1 Antibody (A03935-1) at a dilution of 1:100. DyLight®488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).