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WAS Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1986a

Specification

WAS Antibody - Product Information

Application	**WB, IHC, FC, E**
Primary Accession	P42768
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2a**
Calculated MW	**53kDa KDa**

Description
The Wiskott-Aldrich syndrome (WAS) family of proteins share similar domain structure, and are involved in transduction of signals from receptors on the cell surface to the actin cytoskeleton. The presence of a number of different motifs suggests that they are regulated by a number of different stimuli, and interact with multiple proteins. Recent studies have demonstrated that these proteins, directly or indirectly, associate with the small GTPase, Cdc42, known to regulate formation of actin filaments, and the cytoskeletal organizing complex, Arp2/3. Wiskott-Aldrich syndrome is a rare, inherited, X-linked, recessive disease characterized by immune dysregulation and microthrombocytopenia, and is caused by mutations in the WAS gene. The WAS gene product is a cytoplasmic protein, expressed exclusively in hematopoietic cells, which show signalling and cytoskeletal abnormalities in WAS patients. A transcript variant arising as a result of alternative promoter usage, and containing a different 5' UTR sequence, has been described, however, its full-length nature is not known.

Immunogen
Purified recombinant fragment of human WAS (AA: 57-170) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide.

WAS Antibody - Additional Information

Gene ID 7454

Other Names
Wiskott-Aldrich syndrome protein, WASp, WAS, IMD2

Dilution
WB~~1/500 - 1/2000
IHC~~1/200 - 1/1000
FC~~1/200 - 1/400
E~~1/10000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
WAS Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

WAS Antibody - Protein Information

Name WAS

Synonyms IMD2

Function
Effector protein for Rho-type GTPases that regulates actin filament reorganization via its interaction with the Arp2/3 complex (PubMed:12235133, PubMed:12769847, PubMed:16275905). Important for efficient actin polymerization (PubMed:12235133, PubMed:16275905, PubMed:8625410). Possible regulator of lymphocyte and platelet function (PubMed:9405671). Mediates actin filament reorganization and the formation of actin pedestals upon infection by pathogenic bacteria (PubMed:18650809). In addition to its role in the cytoplasmic cytoskeleton, also promotes actin polymerization in the nucleus, thereby regulating gene transcription and repair of damaged DNA (PubMed:20574068). Promotes homologous recombination (HR) repair in response to DNA damage by promoting nuclear actin polymerization, leading to drive motility of double-strand breaks (DSBs) (PubMed:29925947).

Cellular Location
Cytoplasm, cytoskeleton. Nucleus

Tissue Location
Expressed predominantly in the thymus. Also found, to a much lesser extent, in the spleen.

WAS Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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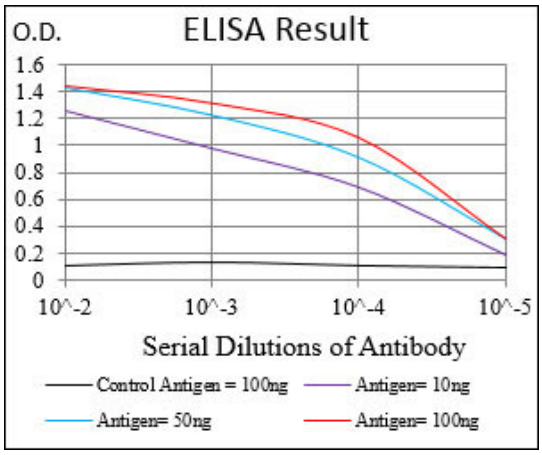

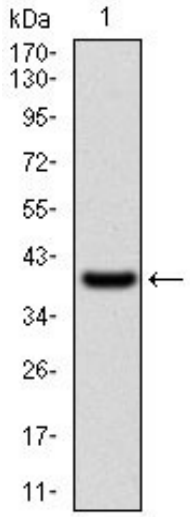

Figure 1: Western blot analysis using WAS mAb against human WAS (AA: 57-170) recombinant protein. (Expected MW is 39 kDa)

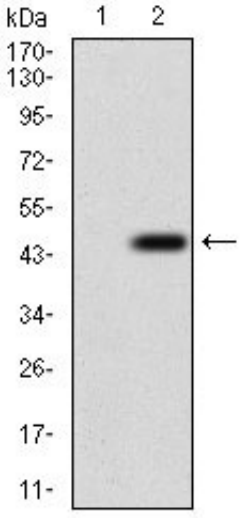

Figure 2: Western blot analysis using WAS mAb against HEK293 (1) and WAS (AA: 57-170)-hIgGFc transfected HEK293 (2) cell lysate.

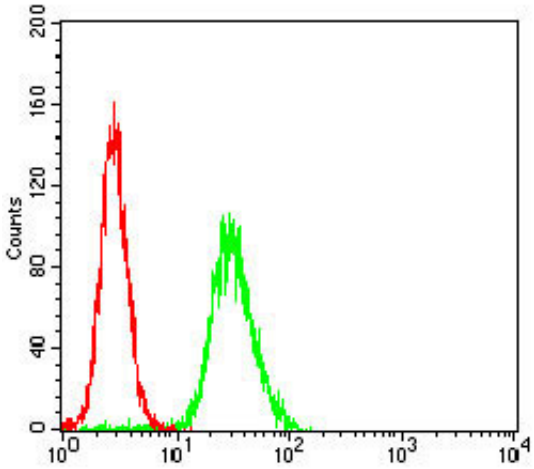

Figure 3: Flow cytometric analysis of Hela cells using WAS mouse mAb (green) and negative control (red).

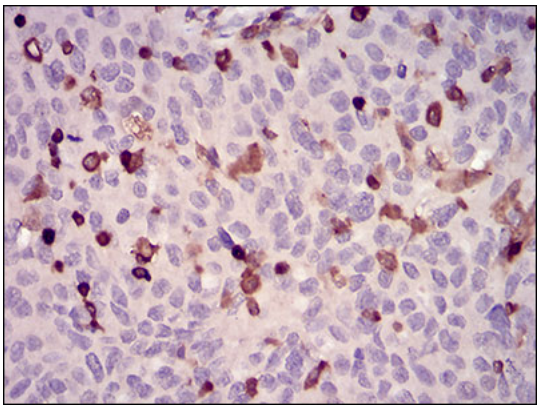

Figure 4: Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using WAS mouse mAb with DAB staining.

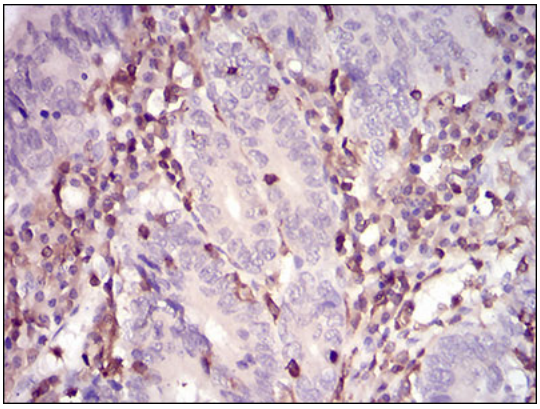

Figure 5: Immunohistochemical analysis of paraffin-embedded colon cancer tissues using WAS mouse mAb with DAB staining.

WAS Antibody - Background

Mammalian mitochondrial ribosomal proteins are encoded by nuclear genes and help in protein synthesis within the mitochondrion. Mitochondrial ribosomes (mitoribosomes) consist of a small 28S subunit and a large 39S subunit. They have an estimated 75% protein to rRNA composition compared to prokaryotic ribosomes, where this ratio is reversed. Another difference between mammalian mitoribosomes and prokaryotic ribosomes is that the latter contain a 5S rRNA. Among different species, the proteins comprising the mitoribosome differ greatly in sequence, and sometimes in biochemical properties, which prevents easy recognition by sequence homology. This

gene encodes a protein identified as belonging to both the 28S and the 39S subunits. Alternative splicing results in multiple transcript variants. Pseudogenes corresponding to this gene are found on chromosomes 4q, 6p, 6q, 7p, and 15q. ;

WAS Antibody - References

1. Mol Cell Biol. 2012 Aug;32(15):3153-63.2. Dis Markers. 2010;29(3-4):157-75.