10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

B2M Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1899a

Specification

B2M Antibody - Product Information

Application	**E, WB, IF, FC, IHC**
Primary Accession	P61769
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**13.7kDa KDa**

Description
This gene encodes a serum protein found in association with the major histocompatibility complex (MHC) class I heavy chain on the surface of nearly all nucleated cells. The protein has a predominantly beta-pleated sheet structure that can form amyloid fibrils in some pathological conditions. A mutation in this gene has been shown to result in hypercatabolic hypoproteinemia.

Immunogen
Purified recombinant fragment of human B2M (AA: 21-100) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide.

B2M Antibody - Additional Information

Gene ID 567

Other Names
Beta-2-microglobulin, Beta-2-microglobulin form pI 5.3, B2M

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

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
B2M Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

B2M Antibody - Protein Information

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Name B2M (HGNC:914)

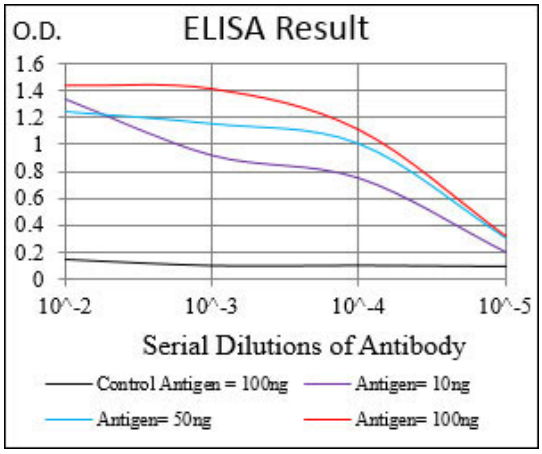
Function
Component of the class I major histocompatibility complex (MHC). Involved in the presentation of peptide antigens to the immune system. Exogenously applied M.tuberculosis EsxA or EsxA-EsxB (or EsxA expressed in host) binds B2M and decreases its export to the cell surface (total protein levels do not change), probably leading to defects in class I antigen presentation (PubMed:25356553).

Cellular Location
Secreted. Cell surface. Note=Detected in serum and urine (PubMed:1336137, PubMed:7554280). {ECO:0000269|PubMed:7554280, ECO:0000269|Ref.6}

B2M 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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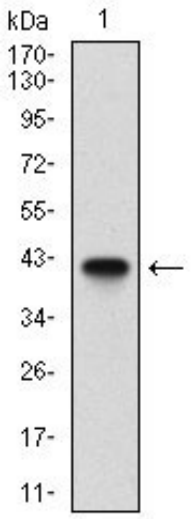


Figure 1: Western blot analysis using B2M mAb against human B2M (AA: 21-100) recombinant protein. (Expected MW is 35.4 kDa)

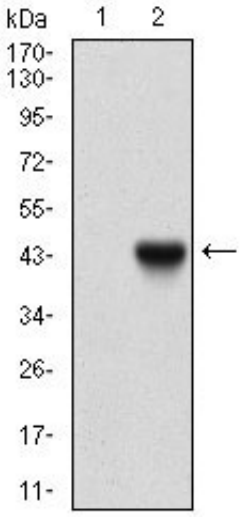


Figure 2: Western blot analysis using B2M mAb against HEK293 (1) and B2M (AA: 21-100)-hIgGFc transfected HEK293 (2) cell lysate.

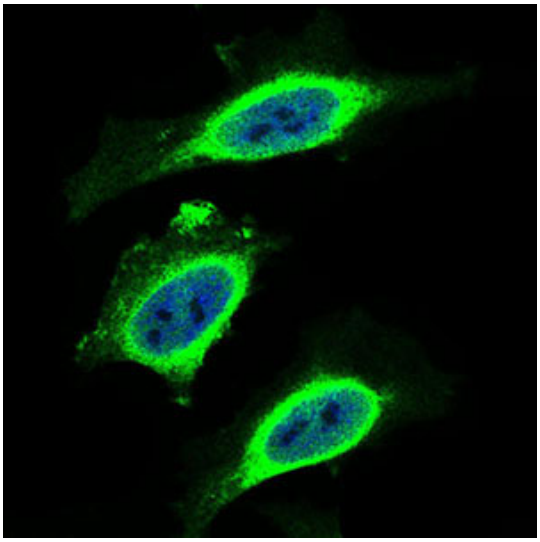


Figure 3: Immunofluorescence analysis of Hela cells using B2M mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Secondary antibody from Fisher (Cat#: 35503)

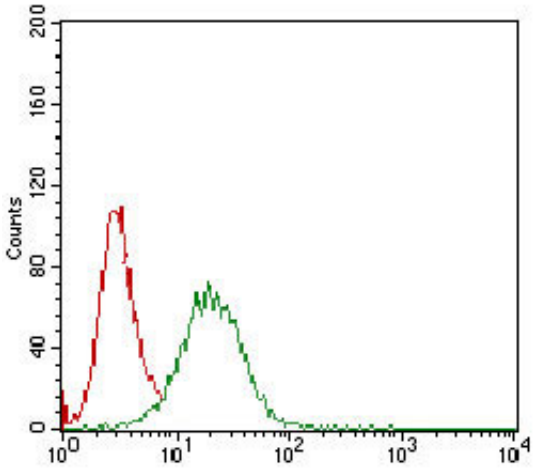


Figure 4: Flow cytometric analysis of A431 cells using B2M mouse mAb (green) and negative control (red).

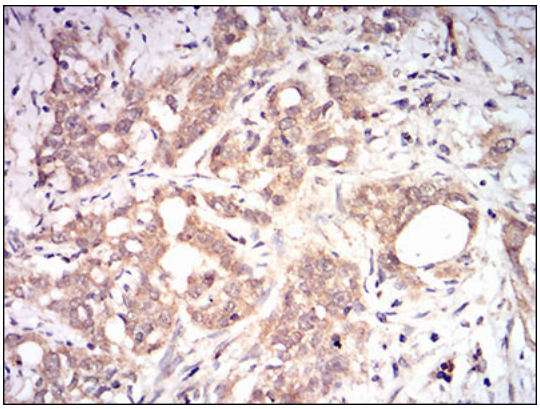


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using B2M mouse mAb with DAB staining.

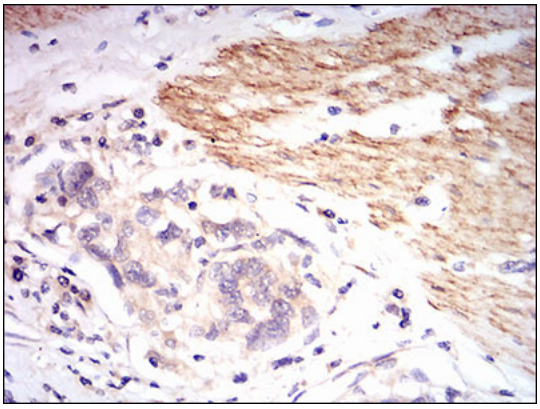


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using B2M mouse mAb with DAB staining.

B2M Antibody - Background

The protein encoded by this gene is a transmembrane (type I) heparan sulfate proteoglycan and is a member of the syndecan proteoglycan family. The syndecans mediate cell binding, cell signaling, and cytoskeletal organization and syndecan receptors are required for internalization of the HIV-1 tat protein. The syndecan-1 protein functions as an integral membrane protein and participates in cell proliferation, cell migration and cell-matrix interactions via its receptor for extracellular matrix proteins. Altered syndecan-1 expression has been detected in several different tumor types. While several transcript variants may exist for this gene, the full-length natures of only two have been

described to date. These two represent the major variants of this gene and encode the same protein. ; ; ; ; ;

B2M Antibody - References

1. Cancer Immunol Immunother. 2012 Sep;61(9):1359-71. 2. Lupus. 2012 Sep;21(10):1098-104.