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

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P61769
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4G5A1
Isotype	IgG1
Calculated MW	13715
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.

Additional Information

Gene ID	567
Other Names	Beta-2-microglobulin, Beta-2-microglobulin form pI 5.3, B2M
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A 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	B2M Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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}

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. ; ; ; ; ;

References

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

Images

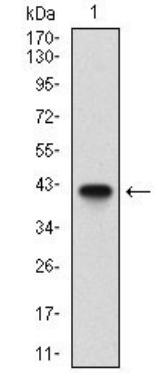


Figure 1: Western blot analysis using B2M mAb against human B2M (AA: 21-100) recombinant protein. (Expected MW is 35.4 kDa)

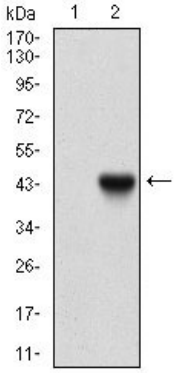
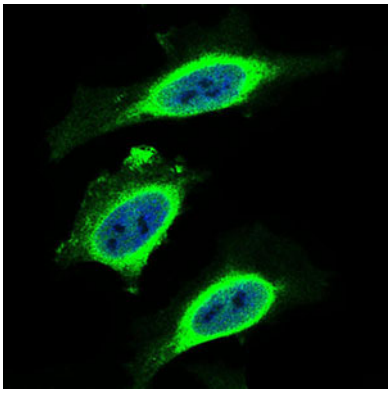


Figure 2: Western blot analysis using B2M mAb against HEK293 (1) and B2M (AA: 21-100)-hIgGFc transfected HEK293 (2) cell lysate.

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



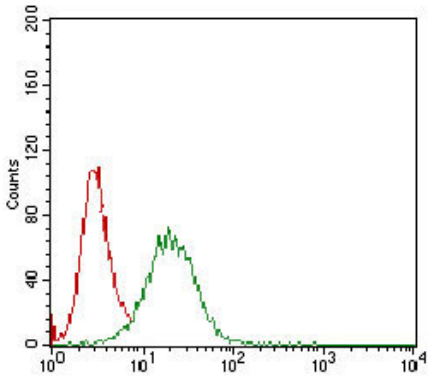


Figure 4: Flow cytometric analysis of A431 cells using B2M mouse mAb (green) and negative control (red).

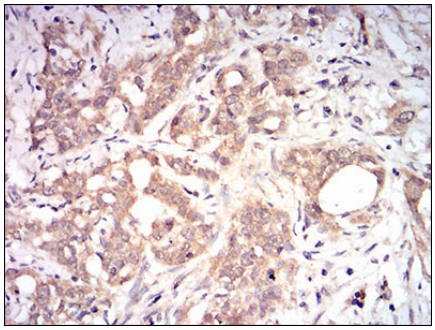


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using B2M mouse mAb with DAB staining.

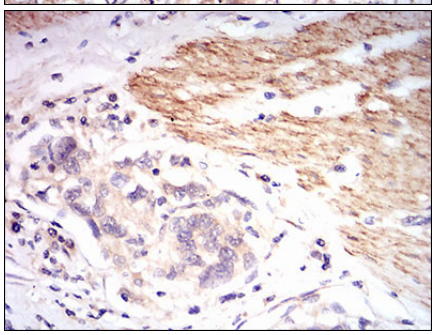


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using B2M mouse mAb with DAB staining.