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Beta-2 Microglobulin (Renal Failure & Tumor Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone B2M/961]
Catalog # AH12138

Product Information

Application	IHC, IF, FC
Primary Accession	P61769
Other Accession	567, 534255
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2b, kappa
Clone Names	B2M/961
Calculated MW	13715

Additional Information

Gene ID	567
Other Names	Beta-2-microglobulin, Beta-2-microglobulin form pI 5.3, B2M
Application Note	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Beta-2 Microglobulin (Renal Failure & Tumor Marker) Antibody - With BSA and Azide 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}

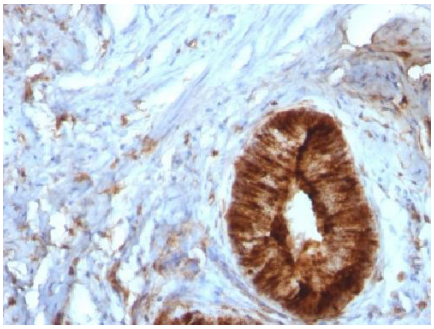
Background

Recognizes a protein of 12kDa, identified as β-2 microglobulin. Major histocompatibility complex (MHC) class 1 molecules bind to antigens for presentation on the surface of cells. The proteasome is responsible for producing these antigens from the components of foreign pathogens. MHC class 1 molecules consist of an α heavy chain that contains three subdomains (α1, α2, α3) and a non-covalent associating light chain, known as β-2-Microglobulin. β-2-Microglobulin associates with the α3 subdomain of the α heavy chain and forms an immunoglobulin domain-like structure that mediates proper folding and expression of MHC class 1 molecules. The α1 and α2 domains of the α heavy chain form the peptide antigen-binding cleft. Mutations in the β-2-Microglobulin gene can enhance the progression of malignant melanoma phenotypes.

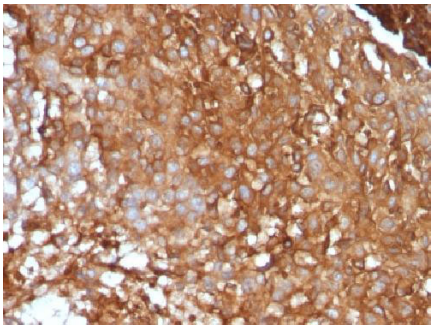
References

Josson, S., et al. 2011. β2-Microglobulin induces epithelial to mesenchymal transition and confers cancer lethality and bone metastasis in human cancer cells. Cancer Res. 71: 2600-2610. |

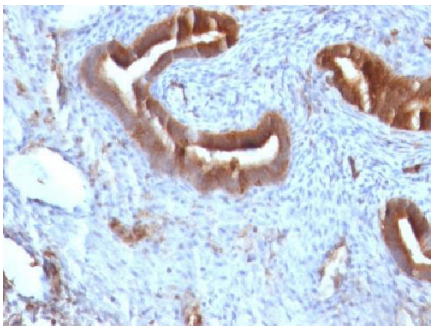
Images



Formalin-fixed, paraffin-embedded human Cervical Carcinoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961).

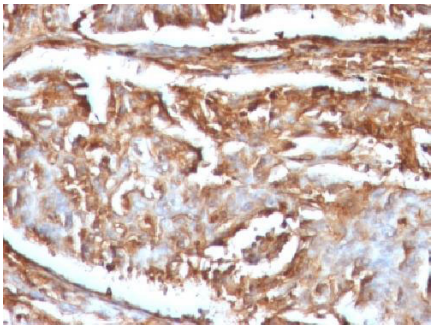


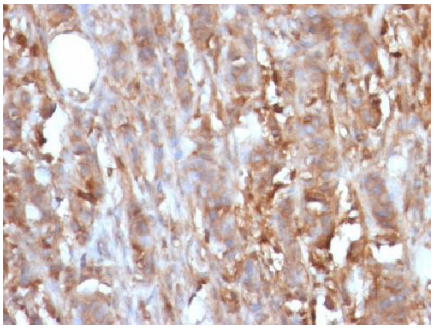
Formalin-fixed, paraffin-embedded human Melanoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961).



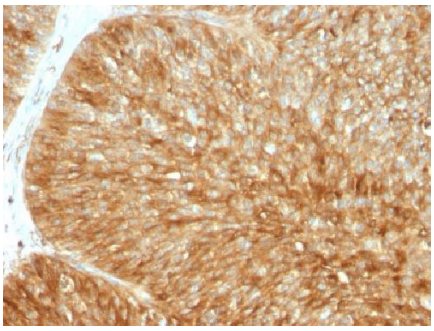
Formalin-fixed, paraffin-embedded human Endometrial Carcinoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961)

Formalin-fixed, paraffin-embedded human Renal Carcinoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961)

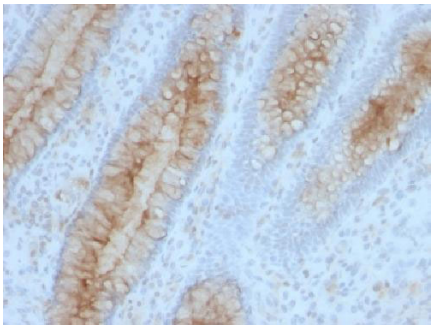




Formalin-fixed, paraffin-embedded human Cervical Carcinoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961)



Formalin-fixed, paraffin-embedded human Bladder Carcinoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961)



Formalin-fixed, paraffin-embedded human Colon Carcinoma stained with Beta-2-Microglobulin Monoclonal Antibody (B2M/961)