

Anti-B2M/beta 2-Microglobulin Antibody (7P459)

Product Details

Ig Type:	Mouse IgG1
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7P459
Purification:	Protein A

Applications

Verified Activity:

1. Anti-B2M mouse monoclonal antibody at 1:500 dilution.
 - Lane A: A431 Whole Cell Lysate.
 - Lane B: U937 Whole Cell Lysate.
 - Lane C: Raji Whole Cell Lysate.
 - Lane D: HeLa Whole Cell lysate.
 - Lysates/proteins at 30 µg per lane.
 - Secondary
 - Goat Anti-Mouse IgG (H+L)/HRP at 1/10000 dilution.
 - Developed using the ECL technique.
 - Performed under reducing conditions.
 - Predicted band size:14 kDa.
 - Observed band size:14 kDa.
2. Immunochemical staining of human B2M in human ovarian cancer with mouse monoclonal antibody at 1:60 dilution, formalin-fixed paraffin embedded sections.
3. Immunochemical staining of human B2M in human skin with mouse monoclonal antibody at 1:60 dilution, formalin-fixed paraffin embedded sections.
4. Immunofluorescence staining of B2M in Hela cells. Cells were fixed with 4% PFA, permeabilized with 0.1% Triton X-100 in PBS, blocked with 10% serum, and incubated with mouse anti-human B2M monoclonal antibody (dilution ratio 1:60) at 4°C overnight. Then cells were stained with the Alexa Fluor®488-conjugated Goat Anti-mouse IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to Cytoplasm and cell membrane.
5. Flow cytometric analysis of Human B2M / Beta-2-microglobulin expression on human whole blood lymphocytes. Cells were stained with purified anti-Human B2M / Beta-2-microglobulin, then a PE-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes.
6. Anti-Beta-2 microglobulin mouse monoclonal antibody at 1:500 dilution.
 - Lane A: Hela Whole Cell Lysate.
 - Lane B: Beta-2 microglobulin knockout Hela Whole Cell lysate.
 - Lysates/proteins at 30 µg per lane.
 - Secondary
 - Goat Anti-Mouse IgG (H+L)/HRP at 1/10000 dilution.
 - Developed using the ECL technique.
 - Performed under reducing conditions.
 - Predicted band size:14 kDa.
 - Observed band size:14 kDa(Validation Experiment)

A DRUG SCREENING EXPERT

Application: ELISA,ELISA(Det),FCM,ICC/IF,IHC-P,WB
Recommended WB: 1:500-1:2000; ELISA: 1:1000-1:2000; IHC-P: 1:30-1:100; ICC-IF: 1:20-1:100; FCM: 1:25-1:100; ELISA(Det): 1:1000-1:10000

Properties

Stability & Storage: Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping: Shipping with blue ice.

Antigen Details

Immunogen: Recombinant Protein: Human Beta-2 microglobulin/B2M Protein (TMPY-01686)
Antigen Species: Human
Synonyms: beta-2 microglobulin; β -2 microglobulin

Research Background

B2M, also known as β 2-Microglobulin or CDABP0092, is a component of MHC class I molecules found expression in all nucleated cells (excludes red blood cells). The major function of MHC class I molecules is to display fragments of proteins from within the cell to T-cells and cells containing foreign proteins will be attacked. B2M (β 2-Microglobulin) is a low molecular weight protein. It was demonstrated that B2M (β 2-Microglobulin) was localized in the membranes of nucleated cells and was found to be associated with HL-A antigens. B2M (β 2-Microglobulin) is present in free form in various body fluids and as a subunit of histocompatibility antigens on cell surfaces lateral to the α 3 chain. Unlike α 3, β 2 has no transmembrane region. Directly above β 2 lies the α 1 chain, which itself is lateral to the α 2. In the absence of B2M (β 2 microglobulin), very limited amounts of MHC class I (classical and non-classical) molecules can be detected on the surface. In the absence of MHC class I, CD8 T cells, a subset of T cells involved in the development of acquired immunity cannot develop. Low levels of B2M (β 2 microglobulin) can indicate non-progression of HIV.

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