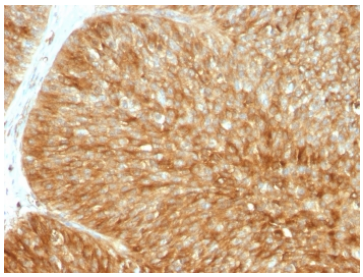
B2M Antibody B2M/1857R / Beta-2 Microglobulin Protein Antibody [clone B2M/1857R] (V3539)

Catalog No.	Formulation	Size
V3539-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3539-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3539SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3539IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

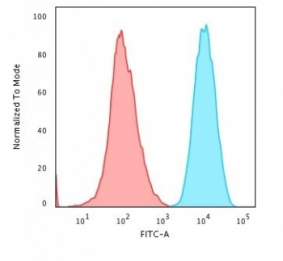
Recombinant RABBIT MONOCLONAL

Bulk quote request

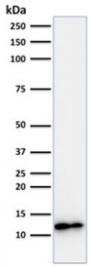
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	B2M/1857R
Purity	Protein A affinity chromatography
UniProt	P61769
Localization	Cytoplasmic
Applications	Western blot: 1-2ug/ml Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 2-4ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Prediluted IHC only format: incubate for 30 min at RT (1)
Limitations	This B2M Antibody B2M/1857R / Beta-2 Microglobulin Protein Antibody is available for research use only.



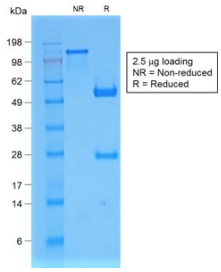
B2M Antibody B2M/1857R in Human Bladder Carcinoma IHC. Immunohistochemistry staining of FFPE human bladder carcinoma tissue with B2M Antibody / Beta-2 Microglobulin Protein Antibody, clone B2M/1857R. HIER was performed by boiling tissue sections in 10 mM citrate buffer, pH 6, for 10-20 min followed by cooling at RT for 20 min. The observed staining demonstrates beta-2 microglobulin expression in human bladder carcinoma tissue.



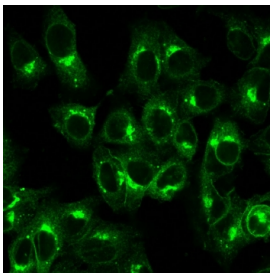
B2M Antibody B2M/1857R in HeLa Cervical Cancer Cells FACS. Flow cytometry analysis of PFA-fixed human HeLa cervical cancer cells with B2M Antibody / Beta-2 Microglobulin Protein Antibody, clone B2M/1857R. Red represents the isotype control and blue represents B2M antibody staining. Antibody-associated fluorescence demonstrates beta-2 microglobulin detection in HeLa cells by FACS.



B2M Antibody B2M/1857R in Raji B Lymphocytes WB. Western blot testing of human Raji B lymphocyte cell lysate with B2M Antibody / Beta-2 Microglobulin Protein Antibody, clone B2M/1857R. A band is detected at approximately 12-14 kDa, consistent with the expected molecular weight of beta-2 microglobulin. This B2M Antibody demonstrates detection of beta-2 microglobulin in human Raji cells.



Purified B2M Antibody B2M/1857R SDS-PAGE. Gel run analysis of purified, BSA-free B2M Antibody / Beta-2 Microglobulin Protein Antibody, clone B2M/1857R. Analysis of the purified recombinant rabbit monoclonal antibody provides confirmation of antibody integrity and purity.



B2M Antibody B2M/1857R in HeLa Cervical Cancer Cells IF. Immunofluorescence staining of PFA-fixed human HeLa cervical cancer cells with B2M Antibody / Beta-2 Microglobulin Protein Antibody, clone B2M/1857R. The observed fluorescent staining demonstrates beta-2 microglobulin detection in HeLa cells by IF.

Description

B2M Antibody B2M/1857R / Beta-2 Microglobulin Protein Antibody detects beta-2 microglobulin, a small protein encoded by the B2M gene and an essential component of major histocompatibility complex class I molecules. B2M associates noncovalently with the MHC class I heavy chain and contributes to the stable assembly and cell-surface expression of MHC class I complexes. Through this relationship, beta-2 microglobulin has an important role in antigen presentation, immune recognition and surveillance of nucleated cells.

MHC class I complexes present intracellularly derived peptides to CD8-positive T cells. Stable complex formation requires an MHC class I heavy chain, beta-2 microglobulin and a bound peptide. Although B2M does not span the plasma

membrane, its association with the heavy chain is important for proper folding and surface expression of the complex. Alterations affecting B2M can therefore influence MHC class I expression and recognition of cells by the adaptive immune system.

Beta-2 microglobulin is widely studied in immunology, cancer biology and infectious disease research. Loss or disruption of B2M expression can impair MHC class I antigen presentation and provide a mechanism through which tumor cells evade cytotoxic T-cell recognition. B2M biology is consequently relevant to studies of tumor immune surveillance, immune escape and mechanisms affecting responses or resistance to cancer immunotherapy.

B2M can also be released from cell surfaces and detected as a soluble protein in biological fluids. Changes in beta-2 microglobulin levels are investigated in hematologic malignancies, renal biology and conditions associated with altered immune-cell turnover. Elevated B2M has been extensively studied in multiple myeloma and lymphoid malignancies, connecting its fundamental role in MHC class I biology with broader research into immune function and disease.

Clone B2M/1857R is a recombinant rabbit monoclonal antibody generated against full-length recombinant human beta-2 microglobulin. It has been evaluated by Western blot, immunohistochemistry, immunofluorescence and flow cytometry in human samples. Recombinant production provides a defined antibody sequence and supports consistent performance across manufacturing lots. NSJ Bioreagents supplies antibodies for immunology and antigen-presentation research. A B2M Antibody can be used to investigate beta-2 microglobulin expression, MHC class I biology, antigen presentation and immune surveillance.

For additional research on beta-2 microglobulin expression, MHC class I complexes and antigen presentation, including a protein microarray validated reagent, see our Beta-2 Microglobulin Antibody / MHC Class I Component Antibody page.

Application Notes

Optimal dilution of the B2M Antibody B2M/1857R / Beta-2 Microglobulin Protein Antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Full length recombinant human protein was used as the immunogen for the recombinant B2M antibody.

Storage

Store the recombinant B2M antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

B2M antibody, Beta-2 Microglobulin Protein antibody, Beta-2 Microglobulin antibody, Beta-2-Microglobulin antibody, MHC Class I Light Chain antibody

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