Human β_2-Microglobulin Antibody

Monoclonal Mouse IgG_1 Clone # 883028

Catalog Number: MAB8248

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human β_2-Microglobulin in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 883028
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human β_2-Microglobulin Met1-Met119 Accession # P61769
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

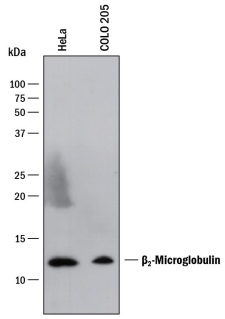
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Flow Cytometry	2.5 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

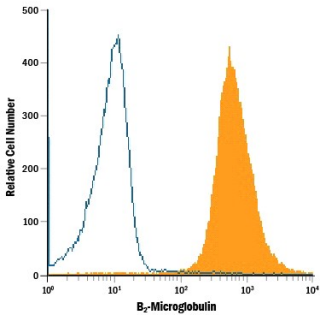
DATA

Western Blot



Detection of Human β_2-Microglobulin by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and COLO 205 human colorectal adenocarcinoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human β_2-Microglobulin Monoclonal Antibody (Catalog # MAB8248) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for β_2-Microglobulin at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of β_2-Microglobulin in Human Lymphocytes by Flow Cytometry. Human peripheral blood lymphocytes were stained with Mouse Anti-Human β_2-Microglobulin Monoclonal Antibody (Catalog # MAB8248, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

β_2-Microglobulin (b2M) is a 12 kDa secreted polypeptide that serves as the light chain of Class I MHC molecules. Possessing an Ig-like domain, b2M noncovalently associates with both 44 kDa classical (HLA-A, -B, -C) and 40 kDa non-classical (HLA-E, -F, -G) Class I MHC heavy chains as well as with 43-49 kDa Class I non-MHC heavy chains (CD1). b2M is expressed on nearly all nucleated cells, with neurons being a notable exception. Circulating b2M is generated during normal HLA turnover. It can also dissociate from the MHC complex and circulate as full length and N-terminal truncated peptides of 93, 91, and 90 amino acids. It has been measured in a variety of body fluids, including serum, plasma, saliva, CSF, and urine. b2M freely passes through the glomerular membrane, but it is 99% actively reabsorbed and degraded in the proximal tubule cells. Circulating b2M levels are elevated in rheumatoid arthritis, systemic lupus erythematosus, viral infections, and conditions with decreased glomerular filtration. Human b2M shares 70% and 75% amino acid sequence identity with mouse and rat b2M, respectively.

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