



β -2-Microglobulin (YTH470.5): sc-58905

BACKGROUND

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 ($\alpha 1$, $\alpha 2$, $\alpha 3$), and a non-covalent associating light chain, known as β -2-Microglobulin. β -2-Microglobulin associates with the $\alpha 3$ 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 $\alpha 1$ and $\alpha 2$ domains of the α heavy chain form the peptide antigen-binding cleft. Mice that lack β -2-Microglobulin protein show a normal distribution of T cells, yet have no mature CD4-8⁺ T cells and are defective in CD4-8⁺ T cell-mediated cytotoxicity. Interferon- γ can stimulate production of β -2-Microglobulin transcripts. The human β -2-Microglobulin gene maps to chromosome 15q21-q22.2 and encodes a 119 amino acid protein. Mutations in the β -2-Microglobulin gene can enhance the progression of malignant melanoma phenotypes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: B2M (human) mapping to 15q21-q22.2; B2m (mouse) mapping to 2 F1-F3.

SOURCE

β -2-Microglobulin (YTH470.5) is a rat monoclonal antibody raised against lymphocytes of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β -2-Microglobulin (YTH470.5) is recommended for detection of β -2-Microglobulin of human origin by flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for β -2-Microglobulin siRNA (h): sc-29592 and β -2-Microglobulin siRNA (h2): sc-44280.

Molecular Weight of β -2-Microglobulin: 12 kDa.

STORAGE

Store at 4^o C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.