SANTA CRUZ BIOTECHNO

HLA-A2 (BB7.2): sc-32236

BACKGROUND

Human leukocyte antigen A2 (HLA-A2) is a human class I histocompatibility (MHC I) molecule. MHC I molecules are integral parts of the immune response and present peptides on the cell surface to T lymphocytes (CTLs). HLA-A2 is associated with interferon-α therapy-induced autoimmune thyroid dysfunction in patients with chronic hepatitis C. In primary T cells, HIV evasion of the cellular immune response reveals that HLA-A2 antigens are downmodulated more dramatically than total MHC class I antigens. Downregulation of MHC class I HLA-A2 antigens occurs not only in primary T cells, but also in β and astrocytoma cell lines. Heavy chain modifications to HLA-A2 enhance the presentation of defined HIV-1 epitope-specific CTL target structures. Incorporation of HIV-1 CTL epitopes into the signal sequence of HLA or tethering of epitopes to the HLA-A2 heavy chain provide simple ways to create effective CTL target structures which can be recognized and lysed by human HLA-A2 restricted RT-specific $CD8^+$ CTL.

REFERENCE

1. Murakami, M., et al. 1999. Autoimmune thyroid disease induced by interferon therapy. Nippon Rinsho 8: 1779-1783.
2. Collins, K.L. and Baltimore, D. 1999. HIV's evasion of the cellular immune response. Immunol. Rev. 168: 65-74.

CHROMOSOMAL LOCATION

Genetic locus: HLA-A (human) mapping to 6p22.1.

SOURCE

HLA-A2 (BB7.2) is a mouse monoclonal antibody raised against solubilized HLA-A2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HLA-A2 (BB7.2) is available conjugated to either phycoerythrin (sc-32236 PE), fluorescein (sc-32236 FITC), Alexa Fluor® 488 (sc-32236 AF488), Alexa Fluor® 546 (sc-32236 AF546), Alexa Fluor® 594 (sc-32236 AF594) or Alexa Fluor® 647 (sc-32236 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32236 AF680) or Alexa Fluor® 790 (sc-32236 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HLA-A2 (BB7.2) is recommended for detection of epitope on α 2 domain of HLA-A2 of human origin by flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for HLA-A siRNA (h): sc-42908, HLA-A shRNA Plasmid (h): sc-42908-SH and HLA-A shRNA (h) Lentiviral Particles: sc-42908-V.

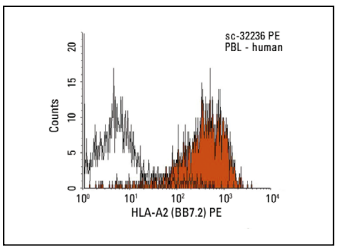
STORAGE

Store at 4° 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.

DATA



HLA-A2 (BB7.2) PE: sc-32236 PE. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG_{2b}-PE: sc-2868.

SELECT PRODUCT CITATIONS

1. Lv, H., et al. 2010. Identification of a novel cytotoxic T lymphocyte epitope from CFP21, a secreted protein of *Mycobacterium tuberculosis*. Immunol. Lett. 133: 94-98.
2. Kotsiou, E., et al. 2011. Dimerization of soluble disulfide trap single-chain major histocompatibility complex class I molecules dependent on peptide binding affinity. Antioxid. Redox Signal. 15: 635-644.
3. Kozako, T., et al. 2011. Oligomannose-coated liposomes efficiently induce human T-cell leukemia virus-1-specific cytotoxic T lymphocytes without adjuvant. FEBS J. 278: 1358-1366.
4. Wu, Y.H., et al. 2012. A novel cytotoxic T lymphocyte epitope analogue with enhanced activity derived from cyclooxygenase-2. Scand. J. Immunol. 76: 278-285.
5. Shen, H., et al. 2013. Identification of a novel HLA-A2-restricted mutated Survivin epitope and induction of specific anti-HCC CTLs that could effectively cross-recognize wild-type Survivin antigen. Cancer Immunol. Immunother. 62: 393-403.
6. Zhang, J., et al. 2013. Peptide FLNPDVLDI of heparanase is a novel HLA-A2-restricted CTL epitope and elicits potent immunological antitumor effects *in vitro* with an 8-branched design. Oncol. Rep. 29: 1955-1961.
7. Shi, R.R., et al. 2013. The immunogenicity of a novel cytotoxic T lymphocyte epitope from tumor antigen PL2L60 could be enhanced by 4-chlorophenylalanine substitution at position 1. Cancer Immunol. Immunother. 62: 1723-1732.
8. Hoa, N.T., et al. 2016. Temozolomide induces the expression of the glioma big potassium (gBK) ion channel, while inhibiting Fascin-1 expression: possible targets for glioma therapy. Expert Opin. Ther. Targets 20: 1155-1167.

PROTOCOLS

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