

# HLA-A/B/C (H-300): sc-30204

## BACKGROUND

Major histocompatibility complex (MHC) molecules form an integral part of the immune response system. They are cell-surface receptors that bind peptides and present them to T lymphocytes. Human leukocyte antigens (HLAs) are polymorphic members of the MHC family that are specifically involved in the presentation of antigens to the T cell receptor. There are two classes of HLA antigens: class I (HLA-A, HLA-B and HLA-C) and class II (HLA-D). Class I molecules are expressed in nearly all cells and play a central role in the immune system by presenting peptides derived from the endoplasmic reticulum. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes. HLA-A, -B and -C encode membrane anchored heavy chains which heterodimerize with a light chain ( $\beta$ -2-Microglobulin) to form MHC-I. Polymorphisms yield hundreds of HLA-A, -B and -C alleles.

## REFERENCES

- Salomonsen, J., et al. 1987. The chicken erythrocyte-specific MHC antigen. Characterization and purification of the B-G antigen by monoclonal antibodies. *Immunogenetics* 25: 373-382.
- Dunon, D., et al. 1990. Ontogenic appearance of MHC class I (B-F) antigens during chicken embryogenesis. *Dev. Immunol.* 1:127-135.
- Moller, L.B., et al. 1991. Variations in the cytoplasmic region account for the heterogeneity of the chicken MHC class I (B-F) molecules. *Immunogenetics* 34:110-120.
- Collins, K.L. and Baltimore, D. 1999. HIV's evasion of the cellular immune response. *Immunol. Rev.* 168: 65-74.
- Murakami, M., et al. 1999. Autoimmune thyroid disease induced by interferon therapy. *Nippon Rinsho* 8: 1779-1783.
- Tourdot, S., et al. 2000. A general strategy to enhance immunogenicity of low-affinity HLA-A2. 1-associated peptides: implication in the identification of cryptic tumor epitopes. *Eur. J. Immunol.* 12: 3411-3421.
- Dela Cruz, C.S., et al. 2000. Creating HIV-1 reverse transcriptase cytotoxic T lymphocyte target structures by HLA-A2 heavy chain modifications. *Int. Immunol.* 9: 1293-1302.
- Itoh, K., et al. 2000. Human tumor-rejection antigens and peptides from genes to clinical research. *Nippon Geka Gakkai Zasshi* 9: 612-617.

## CHROMOSOMAL LOCATION

Genetic locus: HLA-A/HLA-B/HLA-C (human) mapping to 6p21.33.

## SOURCE

HLA-A/B/C (H-300) is a rabbit polyclonal antibody raised against amino acids 25-324 mapping within an internal region of HLA-A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

HLA-A/B/C (H-300) is recommended for detection of HLA-A, HLA-B and HLA-C antigens of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with other HLA antigens.

Molecular Weight of HLA-A/B/C: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

- Brémond, A., et al. 2009. Regulation of HLA class I surface expression requires CD99 and p230/golgin-245 interaction. *Blood* 113: 347-357.
- Brown, M.A., et al. 2010. Human umbilical cord blood-derived endothelial cells reendothelialize vein grafts and prevent thrombosis. *Arterioscler. Thromb. Vasc. Biol.* 30: 2150-2155.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **HLA-A/B/C (D-2): sc-271388** or **HLA-A/B/C(LY5.1): sc-52810**, our highly recommended monoclonal alternatives to HLA-A/B/C (H-300).