

# HLA-A (N-20): sc-17653

## 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 encodes a membrane anchored heavy chain which heterodimerizes with a light chain ( $\beta$ 2-Microglobulin) to form MHC-I. Polymorphisms yield hundreds of HLA-A alleles.

## REFERENCES

- Salomonsen, J., Skjodt, K., Krone, M. and Simonsen, M. 1987. The chicken erythrocyte-specific MHC antigen. Characterization and purification of the B-G antigen by monoclonal antibodies. *Immunogenetics* 25: 373-382.
- Dunon, D., Salomonsen, J., Skjodt, K., Kaufman, J. and Imhof, B.A. 1990. Ontogenic appearance of MHC class I (B-F) antigens during chicken embryogenesis. *Dev. Immunol.* 1: 127-135.
- Moller, L.B., Kaufman, J., Verland, S., Salomonsen, J., Avila, D., Lambris, J.D. and Skjodt, K. 1991. Variations in the cytoplasmic region account for the heterogeneity of the chicken MHC class I (B-F) molecules. *Immunogenetics* 34: 110-120.
- Murakami, M., Kakizaki, S., Takayama, H., Takagi, H. and Mori, M. 1999. Autoimmune thyroid disease induced by interferon therapy. *Nippon Rinsho* 8: 1779-1783.
- 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 6p21.3.

## SOURCE

HLA-A (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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.

Blocking peptide available for competition studies, sc-17653 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

HLA-A (N-20) is recommended for detection of a broad range of HLA 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).

HLA-A (N-20) is also recommended for detection of a broad range of HLA antigens in additional species, including equine, canine, bovine and porcine.

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.

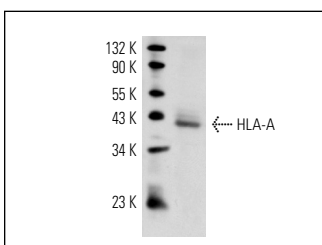
Molecular Weight of HLA-A: 45 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225.

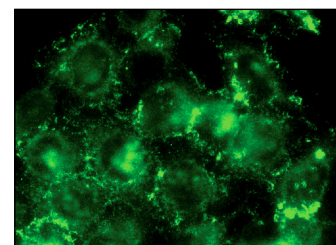
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



HLA-A (N-20): sc-17653. Western blot analysis of HLA-A expression in CCRF-CEM whole cell lysate.



HLA-A (N-20): sc-17653. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## RESEARCH USE

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

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Try **HLA-A (B-11): sc-390473** or **HLA-A (C-6): sc-365485**, our highly recommended monoclonal alternatives to HLA-A (N-20).