

# HLA-A (A-18): sc-23446

## 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 hetero-dimerizes with a light chain ( $\beta$ -2-Microglobulin) to form MHC-I. Polymorphisms yield hundreds of HLA-A 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.

## CHROMOSOMAL LOCATION

Genetic locus: HLA-A (human) mapping to 6p21.3.

## SOURCE

HLA-A (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HLA-A of human origin.

## APPLICATIONS

HLA-A (A-18) is recommended for a broad range of HLA protein family members 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 and immunohistochemistry (including paraffin-embedded sections) (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 (A-18) is also recommended for detection of a broad range of HLA antigens in additional species, including equine.

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.

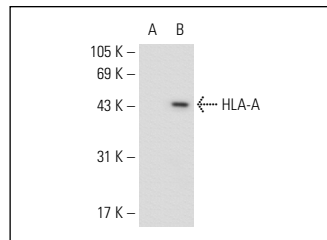
Positive Controls: CCRF-HSB-2 cell lysate: sc-2265, HLA-B (h): 293T Lysate: sc-113341 or CCRF-CEM cell lysate: sc-2225.

## PRODUCT

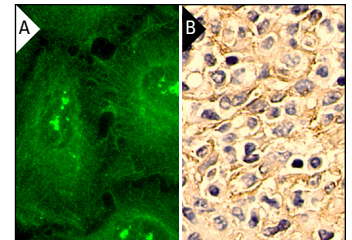
Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23446 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## DATA



HLA-A (A-18): sc-23446. Western blot analysis of HLA-A expression in non-transfected: sc-117752 (A) and human HLA-A transfected: sc-159540 (B) 293T whole cell lysates.



HLA-A (A-18): sc-23446. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane localization (B).

## SELECT PRODUCT CITATIONS

- Simpson-Abelson, M.R., et al. 2008. Long-term engraftment and expansion of tumor-derived memory T cells following the implantation of non-disrupted pieces of human lung tumor into NOD-scid IL-2R $\gamma$ (null) mice. *J. Immunol.* 180: 7009-7018.
- Gómez-Núñez, M., et al. 2008. Non-natural and photo-reactive amino acids as biochemical probes of immune function. *PLoS ONE* 3: e3938.

## 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.


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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 (A-18).