

# HLA-A (B-11): sc-390473

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: HLA-A (human) mapping to 6p22.1; H2-D (mouse) mapping to 17 B1.

## SOURCE

HLA-A (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 26-45 near the N-terminus of HLA-A of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-390473 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## 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 (B-11) is recommended for detection of a broad range of HLA antigens of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

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.

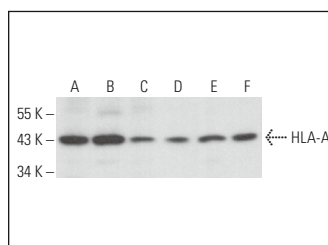
Molecular Weight of HLA-A: 45 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, WR19L cell lysate: sc-3805 or EOC 20 whole cell lysate: sc-364187.

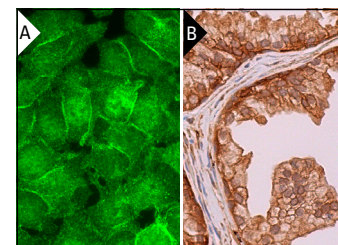
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



HLA-A (B-11): sc-390473. Western blot analysis of HLA-A expression in RAW 264.7 (A), WR19L (B), WEHI-231 (C), C6 (D), c4 (E) and EOC 20 (F) whole cell lysates.



HLA-A (B-11): sc-390473. Immunofluorescence staining of formalin-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing membrane and cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Mukherjee, R.N. and Levy, D.L. 2019. Reticulon 4a promotes exocytosis in mammalian cells. *Mol. Biol. Cell* 30: 2349-2357.
- Almiñana, C., et al. 2021. Isolation and characterization of equine uterine extracellular vesicles: a comparative methodological study. *Int. J. Mol. Sci.* 22: 979.
- Zhang, W., et al. 2024. Inhibition of autophagy-related protein 7 enhances anti-tumor immune response and improves efficacy of immune checkpoint blockade in microsatellite instability colorectal cancer. *J. Exp. Clin. Cancer Res.* 43: 114.

## 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) for detailed protocols and support products.



See **MHC class I (W6/32): sc-32235** for MHC class I antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.