

HA-1 (h): 293T Lysate: sc-116876

BACKGROUND

Major histocompatibility complex (MHC) molecules, which include human leukocyte antigens (HLAs), form an integral part of the immune response system. They are cell-surface receptors that bind foreign peptides and present them to cytotoxic T lymphocytes (CTLs). Minor histocompatibility antigens can form an immune response upon recognition by certain T cells when complexed with MHC molecules. HA-1 (minor histocompatibility protein HA-1), also known as HA-1, HLA-HA1 or HMHA1, is a 1,136 amino acid GTPase activator of Rho-type GTPases. Expressed in dendritic cells, epidermal Langerhans cells, hematopoietic cells, peripheral blood mononuclear cells and all leukemia and lymphoma cell lines, HA-1 is also found in various solid tissues and tumors. Highly phosphorylated, HA-1 contains one Rho-GAP domain, a single phorbol-ester/DAG-type zinc finger and is encoded by a gene located on human chromosome 19p13.3.

REFERENCES

1. van Els, C.A., et al. 1992. Immunogenetics of human minor histocompatibility antigens: their polymorphism and immunodominance. *Immunogenetics* 35: 161-165.
2. Schreuder, G.M., et al. 1993. A genetic analysis of human minor histocompatibility antigens demonstrates Mendelian segregation independent of HLA. *Immunogenetics* 38: 98-105.
3. Goulmy, E., et al. 1996. Mismatches of minor histocompatibility antigens between HLA-identical donors and recipients and the development of graft-versus-host disease after bone marrow transplantation. *N. Engl. J. Med.* 334: 281-285.
4. den Haan, J.M., et al. 1998. The minor histocompatibility antigen HA-1: a diallelic gene with a single amino acid polymorphism. *Science* 279: 1054-1057.
5. Kaminski, W.E., et al. 2000. Genomic organization of the human cholesterol-responsive ABC transporter ABCA7: tandem linkage with the minor histocompatibility antigen HA-1 gene. *Biochem. Biophys. Res. Commun.* 278: 782-789.
6. Mommaas, B., et al. 2005. Cord blood comprises antigen-experienced T cells specific for maternal minor histocompatibility antigen HA-1. *Blood* 105: 1823-1827.
7. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 601155. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: HMHA1 (human) mapping to 19p13.3.

PRODUCT

HA-1 (h): 293T Lysate represents a lysate of human HA-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

HA-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HA-1 antibodies. Recommended use: 10-20 µl per lane.

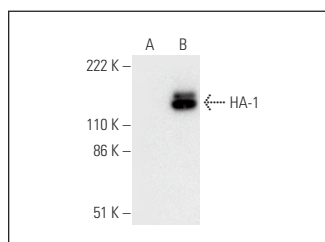
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HA-1 (C-1): sc-393579 is recommended as a positive control antibody for Western Blot analysis of enhanced human HA-1 expression in HA-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



HA-1 (C-1): sc-393579. Western blot analysis of HA-1 expression in non-transfected: sc-117752 (A) and human HA-1 transfected: sc-116876 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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