

HLA-G (4H84): sc-21799



The Power to Question

BACKGROUND

Major histocompatibility complex (MHC), human leukocyte antigen (HLA) molecules are cell-surface receptors that bind foreign peptides and present them to T lymphocytes. MHC class I molecules consist of two polypeptide chains, an α or heavy chain, and a non-covalently associated protein, β -2-Microglobulin. Cytotoxic T lymphocytes bind antigenic peptides presented by MHC class I molecules. Antigens that bind to MHC class I molecules are typically 8-10 residues in length and are stabilized in a peptide binding groove. MHC class II molecules are encoded by polymorphic MHC genes and consist of a non-covalent complex of an α and β chain. Helper T lymphocytes bind antigenic peptides presented by MHC class II molecules. MHC class II molecules bind 13-18 amino acid antigenic peptides. Accumulating in endosomal/lysosomal compartments and on the surface of B cells, HLA-DM and -DO molecules regulate binding of exogenous peptides to class II molecules (HLA-DR) by sustaining a conformation that favors peptide exchange. The differential structural properties of MHC class I and class II molecules account for their respective roles in activating different populations of T lymphocytes.

CHROMOSOMAL LOCATION

Genetic locus: HLA-G (human) mapping to 6p22.1; H2-K1 (mouse) mapping to 17 B1.

SOURCE

HLA-G (4H84) is a mouse monoclonal antibody raised against amino acids 61-83 of HLA-G of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HLA-G (4H84) is available conjugated to agarose (sc-21799 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-21799 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-21799 PE), fluorescein (sc-21799 FITC), Alexa Fluor[®] 488 (sc-21799 AF488), Alexa Fluor[®] 546 (sc-21799 AF546), Alexa Fluor[®] 594 (sc-21799 AF594) or Alexa Fluor[®] 647 (sc-21799 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-21799 AF680) or Alexa Fluor[®] 790 (sc-21799 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HLA-G (4H84) is recommended for detection of HLA-G isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HLA-G siRNA (h): sc-42920, HLA-G siRNA (m): sc-42921, HLA-G shRNA Plasmid (h): sc-42920-SH, HLA-G shRNA Plasmid (m): sc-42921-SH, HLA-G shRNA (h) Lentiviral Particles: sc-42920-V and HLA-G shRNA (m) Lentiviral Particles: sc-42921-V.

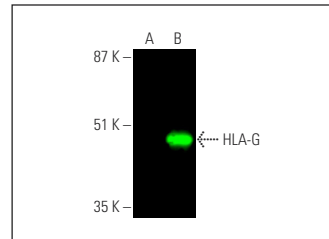
Molecular Weight of HLA-G: 39 kDa.

Positive Controls: HLA-G (h2): 293T Lysate: sc-159524.

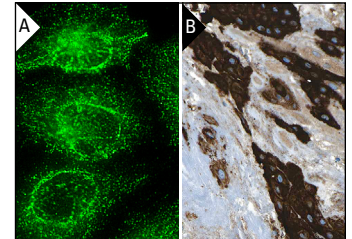
STORAGE

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

DATA



HLA-G (4H84): sc-21799. Near-infrared western blot analysis of HLA-G expression in non-transfected: sc-117752 (A) and human HLA-G transfected: sc-159524 (B) 293T whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGx BP-CFL 680: sc-516180.



HLA-G (4H84): sc-21799. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

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RESEARCH USE

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

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