

Langerin (H-200): sc-33767

BACKGROUND

Langerhans cells (LCs) are a subset of immature dendritic cells (DCs) that specifically localize in the epidermis and other mucosal epithelia. Epidermal LCs possess strong immunostimulatory capacity and play a central role in the initiation and regulation of immune responses. Langerin (CD207) is a Ca²⁺-dependent, C-type lectin domain-containing, type II transmembrane protein that induces epidermal LCs to differentiate into Birbeck granules (BG). BGs are organelles with superimposing and zippering membranes that influence proper class I type antigen presentation to the circulating T-cells. Human spleen, lymph node, thymus, liver, lung and heart express langerin protein. The human langerin gene maps to chromosome 2p13.3 and encodes a 328 amino acid protein.

REFERENCES

- Valladeau, J., Duvert-Frances, V., Pin, J.J., Dezutter-Dambuyant, C., Vincent, C., Massacrier, C., Vincent, J., Yoneda, K., Banchereau, J., Caux, C., Davoust, J. and Saeland, S. 1999. The monoclonal antibody DCGM4 recognizes Langerin, a protein specific of Langerhans cells, and is rapidly internalized from the cell surface. *Eur. J. Immunol.* 29: 2695-2704.
- Valladeau, J., Ravel, O., Dezutter-Dambuyant, C., Moore, K., Kleijmeer, M., Liu, Y., Duvert-Frances, V., Vincent, C., Schmitt, D., Davoust, J., Caux, C., Lebecque, S. and Saeland, S. 2000. Langerin, a novel C-type lectin specific to Langerhans cells, is an endocytic receptor that induces the formation of Birbeck granules. *Immunity* 12: 71-81.
- Mohamadzadeh, M., Berard, F., Essert, G., Chalouni, C., Pulendran, B., Davoust, J., Bridges, G., Palucka, A.K. and Banchereau, J. 2001. Interleukin 15 skews monocyte differentiation into dendritic cells with features of Langerhans cells. *J. Exp. Med.* 194: 1013-1020.
- Larregina, A.T., Morelli, A.E., Spencer, L.A., Logar, A.J., Watkins, S.C., Thomson, A.W. and Falo, L.D., Jr. 2001. Dermal-resident CD14⁺ cells differentiate into Langerhans cells. *Nat. Immunol.* 2: 1151-1158.
- Valladeau, J., et al. 2002. Identification of mouse langerin/CD207 in Langerhans cells and some dendritic cells of lymphoid tissues. *J. Immunol.* 168: 782-792.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604862. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CD207 (human) mapping to 2p13.3.

SOURCE

Langerin (H-200) is a rabbit polyclonal antibody raised against amino acids 1-200 mapping at the N-terminus of Langerin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Langerin (H-200) is recommended for detection of Langerin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for Langerin siRNA (h): sc-43888, Langerin shRNA Plasmid (h): sc-43888-SH and Langerin shRNA (h) Lentiviral Particles: sc-43888-V.

Molecular Weight of Langerin: 48 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **Langerin (H-4): sc-271272**, our highly recommended monoclonal alternative to Langerin (H-200).