

# Langerin (E-17): sc-22620

## 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  $Ca^{2+}$ -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.

## CHROMOSOMAL LOCATION

Genetic locus: CD207 (human) mapping to 2p13.3; Cd207 (mouse) mapping to 6 C3.

## SOURCE

Langerin (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Langerin of mouse origin.

## PRODUCT

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

Langerin (E-17) is available conjugated to agarose (sc-22620 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-22620 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Langerin (E-17) is recommended for detection of Langerin of mouse, rat and 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 (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Langerin (E-17) is also recommended for detection of Langerin in additional species, including equine.

Suitable for use as control antibody for Langerin siRNA (h): sc-43888, Langerin siRNA (m): sc-43889, Langerin shRNA Plasmid (h): sc-43888-SH, Langerin shRNA Plasmid (m): sc-43889-SH, Langerin shRNA (h) Lentiviral Particles: sc-43888-V and Langerin shRNA (m) Lentiviral Particles: sc-43889-V.

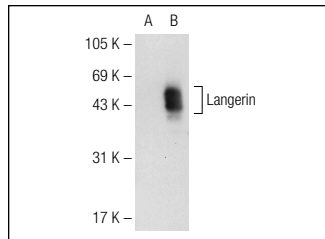
Molecular Weight of Langerin: 48 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Langerin (h): 293 Lysate: sc-159824 or A549 cell lysate: sc-2413.

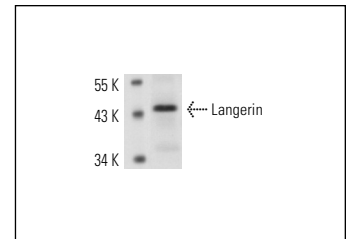
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Langerin (E-17): sc-22620. Western blot analysis of Langerin expression in non-transfected: sc-110760 (A) and human Langerin transfected: sc-159824 (B) 293 whole cell lysates.



Langerin (E-17): sc-22620. Western blot analysis of Langerin expression in A549 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Joachim, R.A., et al. 2008. Stress-induced neurogenic inflammation in murine skin skews dendritic cells towards maturation and migration: key role of intercellular adhesion molecule-1/leukocyte function-associated antigen interactions. *Am. J. Pathol.* 173: 1379-1388.
- Roth, W., et al. 2009. Cytokines as genetic modifiers in  $K5^{-/-}$  mice and in human epidermolysis bullosa simplex. *Hum. Mutat.* 30: 832-841.
- Ginhoux, F., et al. 2009. The origin and development of nonlymphoid tissue CD103<sup>+</sup> DCs. *J. Exp. Med.* 206: 3115-3130.
- Helft, J. and Merad, M. 2010. Isolation of cutaneous dendritic cells. *Methods Mol. Biol.* 595: 231-233.

## 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.



Try **Langerin (H-4): sc-271272**, our highly recommended monoclonal alternative to Langerin (E-17).