

# CD223 (E-17): sc-26368

## BACKGROUND

CD223 (lymphocyte activation gene-3, LAG-3) is a high affinity MHC class II ligand present on the surface of CD4<sup>+</sup>/CD8<sup>+</sup> T cells and NK cells. CD223 shares homology in structure to CD4 molecules, having four similar extracellular Ig-like domains and structural motifs between D1-D3 and D2-D4 domains. CD223 has a glutamic acid-proline (EP) repetitive sequence found in other functionally distinct mammalian, parasitic, and bacterial proteins that may influence a conserved biological function. CD223<sup>+</sup>/CD4<sup>+</sup>/CD8<sup>+</sup> T cells can associate with the T cell receptor (TCR) and downregulate TCR signaling *in vitro*. CD223 inhibits CD4-dependent T cell function via its cytoplasmic domain. CD223 Lys 468 within a conserved "KIEELE" motif is essential for interaction with downstream signaling molecules.

## REFERENCES

1. Demeure, C.E., Wolfers, J., Martin-Garcia, N., Gaulard, P. and Triebel, F. 2001. T lymphocytes infiltrating various tumour types express the MHC class II ligand lymphocyte activation gene-3 (LAG-3): role of LAG-3/MHC class II interactions in cell-cell contacts. *Eur. J. Cancer* 37: 1709-1718.
2. Workman, C.J., Rice, D.S., Dugger, K.J., Kurschner, C. and Vignali, D.A. 2002. Phenotypic analysis of the murine CD4-related glycoprotein, CD223 (LAG-3). *Eur. J. Immunol.* 32: 2255-2263.
3. Andraea, S., Piras, F., Burdin, N. and Triebel, F. 2002. Maturation and activation of dendritic cells induced by lymphocyte activation gene-3 (CD223). *J. Immunol.* 168: 3874-3880.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 153337. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Workman, C.J., Dugger, K.J. and Vignali, D.A. 2002. Cutting edge: molecular analysis of the negative regulatory function of lymphocyte activation gene-3. *J. Immunol.* 169: 5392-5395.
6. Buisson, S. and Triebel, F. 2003. MHC class II engagement by its ligand LAG-3 (CD223) leads to a distinct pattern of chemokine and chemokine receptor expression by human dendritic cells. *Vaccine* 21: 862-868.

## CHROMOSOMAL LOCATION

Genetic locus: LAG3 (human) mapping to 12p13.32.

## SOURCE

CD223 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CD223 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.

Blocking peptide available for competition studies, sc-26368 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CD223 (E-17) is recommended for detection of CD223 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 CD223 siRNA (h): sc-42836, CD223 shRNA Plasmid (h): sc-42836-SH and CD223 shRNA (h) Lentiviral Particles: sc-42836-V.

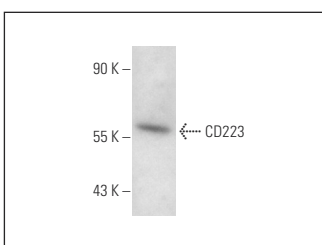
Molecular Weight of CD223: 70 kDa.

Positive Controls: A2058 whole cell lysate: sc-364178.

## 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



CD223 (E-17): sc-26368. Western blot analysis of CD223 expression in A2058 whole cell lysate.

## STORAGE

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



Try **CD223 (D-8): sc-514993**, our highly recommended monoclonal alternative to CD223 (E-17).