

## Z39Ig (Y-18): sc-82436

### BACKGROUND

Cell adhesion molecules (CAMs) influence cell growth, differentiation, embryogenesis, immune response and cancer metastasis by networking information from the extracellular matrix to the cell. The four major families of cell adhesion molecules are immunoglobulin (Ig) superfamily (calcium-independent transmembrane glycoproteins), integrins (transmembrane non-covalently linked heterodimers of  $\alpha$  and  $\beta$  subunits), calcium-dependent cadherins and divalent cation-dependent selectins. Regulation of neuronal synaptic adhesion by CAMs has proven important for learning and memory. Proper embryonic morphogenic development is also heavily dependent on the regulation of cell adhesion molecules. Mutation of CAM genes has been linked to several forms of cancer, effecting tumor growth and metastasis. Z39Ig is an Ig domain cell adhesion molecule detected in all human tissue but mainly expressed in fetal human tissues, adult lungs and placenta. The Z39Ig gene is localized in the pericentromeric region of human chromosome X.

### REFERENCES

- Langnaese, K., et al. 2000. Cloning of Z39Ig, a novel gene with immunoglobulin-like domains located on human chromosome X. *Biochim. Biophys. Acta* 1492: 522-525.
- Walker, M.G. 2002. Z39Ig is coexpressed with activated macrophage genes. *Biochim. Biophys. Acta* 1574: 387-390.
- Ahn, J.H., et al. 2002. Identification of the genes differentially expressed in human dendritic cell subsets by cDNA subtraction and microarray analysis. *Blood* 100: 1742-1754.
- Kim, J.K., et al. 2005. Characterization of monoclonal antibody specific to the Z39Ig protein, a member of immunoglobulin superfamily. *Immunol. Lett.* 99: 153-161.
- Lee, M.Y., et al. 2006. Z39Ig is expressed on macrophages and may mediate inflammatory reactions in arthritis and atherosclerosis. *J. Leukoc. Biol.* 80: 922-928.
- Zang, X. and Allison, J.P. 2006. To be or not to be B7. *J. Clin. Invest.* 116: 2590-2593.
- Vogt, L., et al. 2006. VSIG4, a B7 family-related protein, is a negative regulator of T cell activation. *J. Clin. Invest.* 116: 2817-2826.
- Helmy, K.Y., et al. 2006. CRlg: a macrophage complement receptor required for phagocytosis of circulating pathogens. *Cell* 124: 915-927.
- Wiesmann, C., et al. 2006. Structure of C3b in complex with CRlg gives insights into regulation of complement activation. *Nature* 444: 217-220.

### CHROMOSOMAL LOCATION

Genetic locus: VSIG4 (human) mapping to Xq12; Vsig4 (mouse) mapping to X C3.

### SOURCE

Z39Ig (Y-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Z39Ig of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-82436 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Z39Ig (Y-18) is recommended for detection of Z39Ig of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Z39Ig (Y-18) is also recommended for detection of Z39Ig in additional species, including bovine and porcine.

Suitable for use as control antibody for Z39Ig siRNA (h): sc-72190, Z39Ig siRNA (m): sc-72196, Z39Ig shRNA Plasmid (h): sc-72190-SH, Z39Ig shRNA Plasmid (m): sc-72196-SH, Z39Ig shRNA (h) Lentiviral Particles: sc-72190-V and Z39Ig shRNA (m) Lentiviral Particles: sc-72196-V.

Molecular Weight of Z39Ig: 46 kDa.

### 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) 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.

### SELECT PRODUCT CITATIONS

- Li, H., et al. 2012. The characteristic expression of B7-associated proteins in Langerhans cell sarcoma. *Acta Histochem.* 114: 733-743.

### 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.



Try **Z39Ig (6H8): sc-53977**, our highly recommended monoclonal alternative to Z39Ig (Y-18).