# Ly-6D (RGRSL 114.8.1): sc-65885



The Power to Question

## **BACKGROUND**

Ly-6D (lymphocyte antigen 6D), also known as E48 antigen, is a 128 amino acid glycoprotein that is expressed in squamous cell carcinoma cell lines and squamous cell epithelia tissue. Ly-6D contains a signal peptide, two theoretical phosphorylation sites and three putative myristoylation sites. Upregulation of the gene encoding Ly-6D in head and neck cancers is associated with poor prognosis and high expression of Ly-6D has been linked to enhanced cell migration. Ly-6D is frequently used as a molecular marker for diagnosis and therapy of head-and-neck squamous cell carcinoma (HNSCC). It has been suggested that Ly-6D may regulate the expression levels of certain fucosylated E-Selectin ligands and protein FX, a protein that contributes to the last step in the synthesis of GDP-L-fucose, in HNSCC cell lines. This finding is indicative that Ly-6D may regulate tumor cell adhesion in inflamed vessel walls that express E-Selectin.

#### **REFERENCES**

- 1. Brakenhoff, R.H., et al. 1995. The human E48 antigen, highly homologous to the murine Ly-6 antigen ThB, is a GPI-anchored molecule apparently involved in keratinocyte cell-cell adhesion. J. Cell Biol. 129: 1677-1689.
- 2. Brakenhoff, R.H., et al. 1997. A gain of novel tissue specificity in the human Ly-6 gene E48. J. Immunol. 159: 4879-4886.
- Shan, X., et al. 1998. Characterization and mapping to human chromosome 8q24.3 of Ly-6-related gene 9804 encoding an apparent homologue of mouse TSA-1. J. Immunol. 160: 197-208.
- Eshel, R., et al. 2000. The GPI-linked Ly-6 antigen E48 regulates expression levels of the FX enzyme and of E-selectin ligands on head and neck squamous carcinoma cells. J. Biol. Chem. 275: 12833-12840.
- 5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606204. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Tsukada, Y., et al. 2002. Expression of Ly-6D on the surface of normal and neoplastic mammary epithelial cells of the mouse. Jpn. J. Cancer Res. 93: 986-993.
- Nieuwenhuis, E.J., et al. 2003. Assessment and clinical significance of micrometastases in lymph nodes of head and neck cancer patients detected by E48 (Ly-6D) quantitative reverse transcription-polymerase chain reaction. Lab. Invest. 83: 1233-1240.
- 8. Zhang, Z. and Henzel, W.J. 2004. Signal peptide prediction based on analysis of experimentally verified cleavage sites. Protein Sci. 13: 2819-2824.
- Blancafort, P., et al. 2005. Genetic reprogramming of tumor cells by zinc finger transcription factors. Proc. Natl. Acad. Sci. USA 102: 11716-11721.

# **STORAGE**

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

# **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

## **CHROMOSOMAL LOCATION**

Genetic locus: Ly6d (mouse) mapping to 15 D3.

#### **SOURCE**

Ly-6D (RGRSL 114.8.1) is a rat monoclonal antibody raised against Ly-6D of mouse origin.

# **PRODUCT**

Each vial contains 200  $\mu g \; lg G_{2a}$  in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

Ly-6D (RGRSL 114.8.1) is available conjugated to either phycoerythrin (sc-65885 PE) or fluorescein (sc-65885 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

#### **APPLICATIONS**

Ly-6D (RGRSL 114.8.1) is recommended for detection of Ly-6D of mouse origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for Ly-6D siRNA (m): sc-149158, Ly-6D shRNA Plasmid (m): sc-149158-SH and Ly-6D shRNA (m) Lentiviral Particles: sc-149158-V.

Molecular Weight of Ly-6D: 17 kDa.

## **RESEARCH USE**

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