SANTA CRUZ BIOTECHNOLOGY, INC.

Ly-6D (F-6): sc-374193

SANTA CRUZ BIOTECHNOLOGY

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.
3. 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.
4. 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/
6. 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.

CHROMOSOMAL LOCATION

Genetic locus: LY6D (human) mapping to 8q24.3.

SOURCE

Ly-6D (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 37-69 within an internal region of Ly-6D of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374193 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Ly-6D (F-6) is recommended for detection of Ly-6D of human origin by Western Blotting (starting dilution 1:100, 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 Ly-6D siRNA (h): sc-77553, Ly-6D shRNA Plasmid (h): sc-77553-SH and Ly-6D shRNA (h) Lentiviral Particles: sc-77553-V.

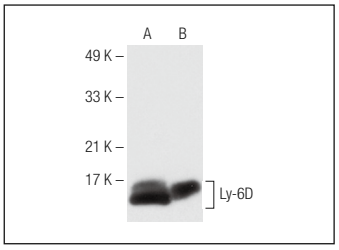
Molecular Weight of Ly-6D: 17 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or SCC-4 whole cell lysate: sc-364363.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Ly-6D (F-6): sc-374193. Western blot analysis of Ly-6D expression in A-431 (**A**) and SCC-4 (**B**) whole cell lysates.

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 for detailed protocols and support products.