# SANTA CRUZ BIOTECHNOLOGY, INC.

# CD15s (5F18): sc-70545



#### BACKGROUND

Selectins are comprised of a family of carbohydrate-binding proteins involved in mediating cellular interactions with leukocytes. Selectins regulate leukocytes in the blood to lymphoid organs and sites of inflammation, and are also thought to play a role in the dissemination of carcinomas that express sialylated Lewis glycan structures, such as sialyl-Lewis X, also known as sLex or CD15s. Core 2 O-glycans, which are synthesized by an essential enzyme C2GnT1 (core 2 ß1,6 N-acetylglucosaminyltransferase) in leukocytes, serve as high-affinity selectin glycan ligands when terminated with CD15s (C2-O-sLex). The CD15s antigen functions as a carbohydrate determinant that is recognized by all members of the selectin family. C2-O-sLex is highly unregulated in colorectal adenocarcinomas and metastatic liver tumors and therefore suggested to be a tumor associated antigen and a useful early predictor of metastasis.

# REFERENCES

- 1. Cummings, R.D. and Smith, D.F. 1992. The selectin family of carbohydratebinding proteins: structure and importance of carbohydrate ligands for cell adhesion. Bioessays 14: 849-856.
- 2. Nelson, R.M., et al. 1993. Higher-affinity oligosaccharide ligands for E-selectin. J. Clin. Invest. 91: 1157-1166.
- 3. Welply, J.K., et al. 1994. Multivalent sialyl-LeX: potent inhibitors of Eselectin-mediated cell adhesion; reagent for staining activated endothelial cells. Glycobiology 4: 259-265.
- 4. Jacob, G.S., et al. 1995. Studies on selectin-carbohydrate interactions. Adv. Exp. Med. Biol. 376: 283-290.
- 5. Walcheck, B., et al. 2002. The monoclonal antibody CHO-131 binds to a core 2 O-glycan terminated with sialyl-Lewis x, which is a functional glycan ligand for P-selectin. Blood 99: 4063-4069.
- 6. Mitoma, J., et al. 2003. Extended core 1 and core 2 branched O-glycans differentially modulate sialyl Lewis X-type L-selectin ligand activity. J. Biol. Chem. 278: 9953-9961.
- 7. St Hill, C.A., et al. 2005. Expression of the high-affinity selectin glycan ligand C2-O-sLeX by colon carcinoma cells. Cancer Lett. 217: 105-113.
- 8. St Hill, C.A., Fet al. 2009. The high affinity selectin glycan ligand C2-O-sLex and mRNA transcripts of the core 2 β-1,6-N-acetylglucosaminyltransferase (C2GnT1) gene are highly expressed in human colorectal adenocarcinomas. BMC Cancer 9: 79.
- 9. St Hill, C.A., Baharo-Hassan, D. and Farooqui, M. 2011. C2-O-sLeX glycoproteins are E-selectin ligands that regulate invasion of human colon and hepatic carcinoma cells. PLoS ONE 6: e16281.

## **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: FUT4 (human) mapping to 11q21.

### SOURCE

CD15s (5F18) is a mouse monoclonal antibody raised against  $\alpha$ -1-3-fucosyltransferase.

#### PRODUCT

Each vial contains 200 µg lgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD15s (5F18) is available conjugated to either phycoerythrin (sc-70545 PE) or fluorescein (sc-70545 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

#### **APPLICATIONS**

CD15s (5F18) is recommended for detection of sialyl-Lewis X (sLeX) of human origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

# **RESEARCH USE**

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