SANTA CRUZ BIOTECHNOLOGY, INC.

P-Selectin (AK4): sc-19996

BACKGROUND

Selectins, also designated CD62 antigens, comprise a family of carbohydrate-binding proteins involved in mediating cellular interactions with leukocytes. L-Selectin (also designated LECAM-1 or CD62L) is expressed on the majority of B and naive T cells and on most monocytes, neutrophils and eosinophils. L-Selectin interacts with specific carbohydrates expressed by activated endothelial cells. P-Selectin (also designated GMP-140 or CD62P), expressed on activated platelets and endothelial cells, and E-Selectin (also designated ELMA-1 or CD62E), expressed on endothelial cells, exhibit overlapping ligand specificities. Both recognize sialyl-Le^x as a ligand and bind to specific carbohydrates on neutrophils and monocytes.

REFERENCES

1. Varki, A. 1994. Selectin ligands. Proc. Natl. Acad. Sci. USA 91: 7390-7397.
2. Tedder, T.F., et al. 1995. The Selectins: vascular adhesion molecules. FASEB J. 10: 866-873.
3. Pavalko, F.M., et al. 1995. The cytoplasmic domain of L-Selectin interacts with cytoskeletal proteins via α-actinin: receptor positioning in microvilli does not require interaction with α-actinin. J. Cell Biol. 129: 1155-1164.

CHROMOSOMAL LOCATION

Genetic locus: SELP (human) mapping to 1q24.2.

SOURCE

P-Selectin (AK4) is a mouse monoclonal antibody raised against carbohydrate recognition domain (CRD) of P-Selectin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for biological studies, sc-19996 L, 200 µg/0.1 ml.

P-Selectin (AK4) is available conjugated to either phycoerythrin (sc-19996 PE) or fluorescein (sc-19996 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

P-Selectin (AK4) is recommended for detection of P-Selectin 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for P-Selectin siRNA (h): sc-29421, P-Selectin shRNA Plasmid (h): sc-29421-SH and P-Selectin shRNA (h) Lentiviral Particles: sc-29421-V.

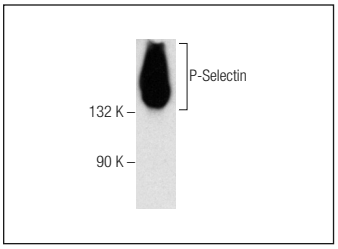
Molecular Weight of P-Selectin: 140 kDa.

Positive Controls: human platelet extract: sc-363773.

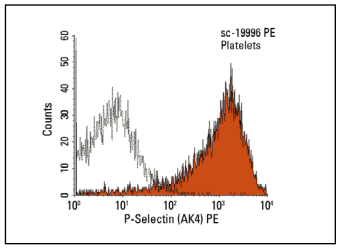
STORAGE

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

DATA



P-Selectin (AK4): sc-19996. Western blot analysis of P-Selectin expression in human platelet extract.



P-Selectin (AK4) PE: sc-19996 PE. FCM analysis of human platelets. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Komai, Y., et al. 2005. Deactivation of neutrophils in suspension by fluid shear stress: a requirement for erythrocytes. Ann. Biomed. Eng. 33: 1375-1386.
2. Yacoub, D., et al. 2006. Essential role of protein kinase Cδ in platelet signaling, $\alpha_{IIb}\beta_3$ activation, and thromboxane A_2 release. J. Biol. Chem. 281: 30024-30035.
3. Wacker, J., et al. 2008. Delayed inhibition of agonist-induced granulocyte-platelet aggregation after low-dose sevoflurane inhalation in humans. Anesth. Analg. 106: 1749-1758.
4. Sakurai, Y., et al. 2015. Platelet geometry sensing spatially regulates α-granule secretion to enable matrix self-deposition. Blood 126: 531-538.
5. French, S.L., et al. 2016. Inhibition of protease-activated receptor 4 impairs platelet procoagulant activity during thrombus formation in human blood. J. Thromb. Haemost. 14: 1642-1654.
6. Cerda, A., et al. 2017. Effects of clopidogrel on inflammatory cytokines and adhesion molecules in human endothelial cells: role of nitric oxide mediating pleiotropic effects. Cardiovasc. Ther. E-published.
7. Sakurai, Y., et al. 2018. A microengineered vascularized bleeding model that integrates the principal components of hemostasis. Nat. Commun. 9: 509.
8. Qiu, Y., et al. 2018. Microvasculature-on-a-chip for the long-term study of endothelial barrier dysfunction and microvascular obstruction in disease. Nat. Biomed. Eng. 2: 453-463.
9. Nishihara, H., et al. 2020. Human $CD4^+$ T cell subsets differ in their abilities to cross endothelial and epithelial brain barriers *in vitro*. Fluids Barriers CNS 17: 3.

CONJUGATES

See **P-Selectin (CTB201): sc-8419** for Selectin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.