

REFERENCES

Abbas, A.K. and Lichtman, A.H. (2005) Cellular and molecular immunology. Elsevier Saunders, Philadelphia, Pa. ; Edinburgh.

Abbas, A.K. and Lichtman, A.H. (2006) Basic immunology : functions and disorders of the immune system. Elsevier Saunders, Philadelphia, Pa. ; Edinburgh.

Abbas, A.K., Murphy, K.M. and Sher, A. (1996) Functional diversity of helper T lymphocytes. Nature 383, 787-93.

Akira, S. and Hemmi, H. (2003) Recognition of pathogen-associated molecular patterns by TLR family. Immunol Lett 85, 85-95.

Akira, S., Takeda, K. and Kaisho, T. (2001) Toll-like receptors: critical proteins linking innate and acquired immunity. Nat Immunol 2, 675-80.

Alberts, B. (2002) Molecular biology of the cell. Garland Science, New York.

Alegre, M.L., Frauwirth, K.A. and Thompson, C.B. (2001) T-cell regulation by CD28 and CTLA-4. Nat Rev Immunol 1, 220-8.

Arancibia, S.A., Beltran, C.J., Aguirre, I.M., Silva, P., Peralta, A.L., Malinarich, F. and Hermoso, M.A. (2007) Toll-like receptors are key participants in innate immune responses. *Biol Res* 40, 97-112.

Barclay, A.N. (1997) *The leucocyte antigen factsbook*. Academic Press, San Diego, Calif. ; London.

Bowie, A.G. and Haga, I.R. (2005) The role of Toll-like receptors in the host response to viruses. *Mol Immunol* 42, 859-67.

Carter, P.J. (2006) Potent antibody therapeutics by design. *Nat Rev Immunol* 6, 343-57.

Chiorazzi, N., Rai, K.R. and Ferrarini, M. (2005) Chronic lymphocytic leukemia. *N Engl J Med* 352, 804-15.

Chothia, C. and Jones, E.Y. (1997) The molecular structure of cell adhesion molecules. *Annu Rev Biochem* 66, 823-62.

Colantonio, L., Recalde, H., Sinigaglia, F. and D'Ambrosio, D. (2002) Modulation of chemokine receptor expression and chemotactic responsiveness during differentiation of human naive T cells into Th1 or Th2 cells. *Eur J Immunol* 32, 1264-73.

Cooper, A.M., Roberts, A.D., Rhoades, E.R., Callahan, J.E., Getzy, D.M. and Orme, I.M. (1995) The role of interleukin-12 in acquired immunity to *Mycobacterium tuberculosis* infection. *Immunology* 84, 423-32.

Cooper, M.A., Fehniger, T.A., Turner, S.C., Chen, K.S., Ghaheri, B.A., Ghayur, T., Carson, W.E. and Caligiuri, M.A. (2001) Human natural killer cells: a unique innate immunoregulatory role for the CD56(bright) subset. *Blood* 97, 3146-51.

Davis, M.M., Krogsgaard, M., Huppa, J.B., Sumen, C., Purbhoo, M.A., Irvine, D.J., Wu, L.C. and Ehrlich, L. (2003) Dynamics of cell surface molecules during T cell recognition. *Annu Rev Biochem* 72, 717-42.

Deaglio, S. and Malavasi, F. (2006) The CD38/CD157 mammalian gene family: An evolutionary paradigm for other leukocyte surface enzymes. *Purinergic Signal* 2, 431-41.

Degli-Esposti, M.A. and Smyth, M.J. (2005) Close encounters of different kinds: dendritic cells and NK cells take centre stage. *Nat Rev Immunol* 5, 112-24.

Finberg, R.W., Re, F., Popova, L., Golenbock, D.T. and Kurt-Jones, E.A. (2004) Cell activation by Toll-like receptors: role of LBP and CD14. *J Endotoxin Res* 10, 413-8.

Fischer, M.B., Ma, M., Goerg, S., Zhou, X., Xia, J., Finco, O., Han, S., Kelsoe, G., Howard, R.G., Rothstein, T.L., Kremmer, E., Rosen, F.S. and Carroll, M.C. (1996) Regulation of the B cell response to T-dependent antigens by classical pathway complement. *J Immunol* 157, 549-56.

Friedl, P. and Gunzer, M. (2001) Interaction of T cells with APCs: the serial encounter model. *Trends Immunol* 22, 187-91.

Goding, J.W. (1986) *Monoclonal antibodies : principles and practice : production and application of monoclonal antibodies in cell biology, biochemistry and immunology.* Academic, London.

Goding, J.W. and Howard, M.C. (1998) Ecto-enzymes of lymphoid cells. *Immunol Rev* 161, 5-10.

Goldsby, R.A. and Goldsby, R.A.K.i. (2003) *Immunology.* W.H. Freeman, New York ; Houndmills.

Gust, A.A., Biswas, R., Lenz, H.D., Rauhut, T., Ranf, S., Kemmerling, B., Gotz, F., Glawischnig, E., Lee, J., Felix, G. and Nurnberger, T. (2007) Bacteria-derived peptidoglycans constitute pathogen-associated molecular patterns triggering innate immunity in Arabidopsis. *J Biol Chem* 282, 32338-48.

Haas, K.M., Toapanta, F.R., Oliver, J.A., Poe, J.C., Weis, J.H., Karp, D.R., Bower, J.F., Ross, T.M. and Tedder, T.F. (2004) Cutting edge: C3d functions as a molecular adjuvant in the absence of CD21/35 expression. *J Immunol* 172, 5833-7.

Harlow, E. and Lane, D. (1988) *Antibodies : a laboratory manual*. Cold Spring Harbor Laboratory, New York.

Hermiston, M.L., Xu, Z. and Weiss, A. (2003) CD45: a critical regulator of signaling thresholds in immune cells. *Annu Rev Immunol* 21, 107-37.

Hopper, J.E. and Papagiannes, E. (1986) Evidence by radioimmunoassay that mitogen-activated human blood mononuclear cells secrete significant amounts of light chain Ig unassociated with heavy chain. *Cell Immunol* 101, 122-31.

Janeway, C.A., Jr. and Medzhitov, R. (2002) Innate immune recognition. *Annu Rev Immunol* 20, 197-216.

Kasinrerk, W., Tokrasinwit, N., Moonsom, S. and Stockinger, H. (2000) CD99 monoclonal antibody induce homotypic adhesion of Jurkat cells through protein tyrosine kinase and protein kinase C-dependent pathway. *Immunol Lett* 71, 33-41.

Kasinrerker, W., Tokrasinwit, N. and Phunpae, P. (1999) CD147 monoclonal antibodies induce homotypic cell aggregation of monocytic cell line U937 via LFA-1/ICAM-1 pathway. *Immunology* 96, 184-92.

Khunkaewla, P., Chiampanichayakul, S., Yasamut, U., Pata, S. and Kasinrerker, W. (2007) Production, characterization, and functional analysis of newly established CD99 monoclonal antibodies MT99/1 and MT99/2. *Hybridoma (Larchmt)* 26, 241-50.

Kim, S., Iizuka, K., Kang, H.S., Dokun, A., French, A.R., Greco, S. and Yokoyama, W.M. (2002) In vivo developmental stages in murine natural killer cell maturation. *Nat Immunol* 3, 523-8.

Klotman, M.E. and Chang, T.L. (2006) Defensins in innate antiviral immunity. *Nat Rev Immunol* 6, 447-56.

Kopf, M., Le Gros, G., Bachmann, M., Lamers, M.C., Bluethmann, H. and Kohler, G. (1993) Disruption of the murine IL-4 gene blocks Th2 cytokine responses. *Nature* 362, 245-8.

Koprak, S., Matheravidathu, S., Springer, M., Gould, S. and Dumont, F.J. (2003) Down-regulation of cell surface CXCR6 expression during T cell activation is predominantly mediated by calcineurin. *Cell Immunol* 223, 1-12.

Lanzavecchia, A. and Sallusto, F. (2001) Antigen decoding by T lymphocytes: from synapses to fate determination. *Nat Immunol* 2, 487-92.

Lewis, R.S. and Cahalan, M.D. (1990) Ion channels and signal transduction in lymphocytes. *Annu Rev Physiol* 52, 415-30.

Lewis, R.S. and Cahalan, M.D. (1995) Potassium and calcium channels in lymphocytes. *Annu Rev Immunol* 13, 623-53.

Lewis, R.S., Ross, P.E. and Cahalan, M.D. (1993) Chloride channels activated by osmotic stress in T lymphocytes. *J Gen Physiol* 101, 801-26.

Ley, K., Laudanna, C., Cybulsky, M.I. and Nourshargh, S. (2007) Getting to the site of inflammation: the leukocyte adhesion cascade updated. *Nat Rev Immunol* 7, 678-89.

Liu, Y., Shaw, S.K., Ma, S., Yang, L., Luscinskas, F.W. and Parkos, C.A. (2004) Regulation of leukocyte transmigration: cell surface interactions and signaling events. *J Immunol* 172, 7-13.

Lodish, H.F. (2003) *Molecular cell biology*. W. H. Freeman ; Basingstoke : [Palgrave], New York.

Lohoff, M. and Mak, T.W. (2005) Roles of interferon-regulatory factors in T-helper-cell differentiation. *Nat Rev Immunol* 5, 125-35.

MacDonald, H.R. and Nabholz, M. (1986) T-cell activation. *Annu Rev Cell Biol* 2, 231-53.

Malavasi, F., Funaro, A., Roggero, S., Horenstein, A., Calosso, L. and Mehta, K. (1994) Human CD38: a glycoprotein in search of a function. *Immunol Today* 15, 95-7.

Male, D.K. (2006) *Immunology*. Mosby Elsevier, Philadelphia, Pa.

Mason, D.Y., Andre, P., Bensussan, A., Buckley, C., Civin, C., Clark, E., de Haas, M., Goyert, S., Hadam, M., Hart, D., Horejsi, V., Meuer, S., Morissey, J., Schwartz-Albiez, R., Shaw, S., Simmons, D., Ugucioni, M., van der Schoot, E., Viver, E. and Zola, H. (2001) CD antigens 2001. *Tissue Antigens* 58, 425-30.

McNeill, L., Cassady, R.L., Sarkardei, S., Cooper, J.C., Morgan, G. and Alexander, D.R. (2004) CD45 isoforms in T cell signalling and development. *Immunol Lett* 92, 125-34.

Mitsuyoshi, J.K., Hu, Y. and Test, S.T. (2005) Role of complement receptor type 2 and endogenous complement in the humoral immune response to conjugates of complement C3d and pneumococcal serotype 14 capsular polysaccharide. *Infect Immun* 73, 7311-6.

Morabito, F., Damle, R.N., Deaglio, S., Keating, M., Ferrarini, M. and Chiorazzi, N. (2006) The CD38 ectoenzyme family: advances in basic science and clinical practice. *Mol Med* 12, 342-4.

Moretta, A., Bottino, C., Vitale, M., Pende, D., Cantoni, C., Mingari, M.C., Biassoni, R. and Moretta, L. (2001) Activating receptors and coreceptors involved in human natural killer cell-mediated cytotoxicity. *Annu Rev Immunol* 19, 197-223.

Muller, W.A. (2003) Leukocyte-endothelial-cell interactions in leukocyte transmigration and the inflammatory response. *Trends Immunol* 24, 327-34.

O'Garra, A. and Arai, N. (2000) The molecular basis of T helper 1 and T helper 2 cell differentiation. *Trends Cell Biol* 10, 542-50.

Ostermann, G., Weber, K.S., Zerneck, A., Schroder, A. and Weber, C. (2002) JAM-1 is a ligand of the beta(2) integrin LFA-1 involved in transendothelial migration of leukocytes. *Nat Immunol* 3, 151-8.

Poe, J.C., Hasegawa, M. and Tedder, T.F. (2001) CD19, CD21, and CD22: multifaceted response regulators of B lymphocyte signal transduction. *Int Rev Immunol* 20, 739-62.

Raulet, D.H., Vance, R.E. and McMahon, C.W. (2001) Regulation of the natural killer cell receptor repertoire. *Annu Rev Immunol* 19, 291-330.

Rossmann, E.D., Jeddi-Tehrani, M., Osterborg, A. and Mellstedt, H. (2003) T-cell signaling and costimulatory molecules in B-chronic lymphocytic leukemia (B-CLL): an increased abnormal expression by advancing stage. *Leukemia* 17, 2252-4.

Salmi, M. and Jalkanen, S. (2001) VAP-1: an adhesin and an enzyme. *Trends Immunol* 22, 211-6.

Salmi, M. and Jalkanen, S. (2005) Cell-surface enzymes in control of leukocyte trafficking. *Nat Rev Immunol* 5, 760-71.

Sander, B., Skansen-Saphir, U., Damm, O., Hakansson, L., Andersson, J. and Andersson, U. (1995) Sequential production of Th1 and Th2 cytokines in response to live bacillus Calmette-Guerin. *Immunology* 86, 512-8.

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Sarrias, M.R., Farnos, M., Mota, R., Sanchez-Barbero, F., Ibanez, A., Gimferrer, I., Vera, J., Fenutria, R., Casals, C., Yelamos, J. and Lozano, F. (2007) CD6 binds to pathogen-associated molecular patterns and protects from LPS-induced septic shock. *Proc Natl Acad Sci U S A* 104, 11724-9.

Springer, T.A. (1994) Traffic signals for lymphocyte recirculation and leukocyte emigration: the multistep paradigm. *Cell* 76, 301-14.

Stevens, F.J., Solomon, A. and Schiffer, M. (1991) Bence Jones proteins: a powerful tool for the fundamental study of protein chemistry and pathophysiology. *Biochemistry* 30, 6803-5.

Stowell, C.P. (2006) Therapy with immunoglobulin: applications for monoclonal antibodies. *J Infus Nurs* 29, S29-44.

Straus, D.B. and Weiss, A. (1993) The CD3 chains of the T cell antigen receptor associate with the ZAP-70 tyrosine kinase and are tyrosine phosphorylated after receptor stimulation. *J Exp Med* 178, 1523-30.

Sun, M., Li, L., Gao, Q.S. and Paul, S. (1994) Antigen recognition by an antibody light chain. *J Biol Chem* 269, 734-8.

Tedder, T.F., Zhou, L.J. and Engel, P. (1994) The CD19/CD21 signal transduction complex of B lymphocytes. *Immunol Today* 15, 437-42.

Thomas, M.L. (1989) The leukocyte common antigen family. *Annu Rev Immunol* 7, 339-69.

Trowbridge, I.S. and Thomas, M.L. (1994) CD45: an emerging role as a protein tyrosine phosphatase required for lymphocyte activation and development. *Annu Rev Immunol* 12, 85-116.

Weng, N.P. (2006) Aging of the immune system: how much can the adaptive immune system adapt? *Immunity* 24, 495-9.

Zola, H. (2006) Medical applications of leukocyte surface molecules--the CD molecules. *Mol Med* 12, 312-6.

Zola, H., Mavrangelos, C., Millard, D.J. and Nicholson, I.C. (2006) Conservation of leukocyte cell surface proteins: implications for the generation of monoclonal antibodies against newly identified leukocyte cell surface proteins. *Tissue Antigens* 68, 13-8.

Zola, H., Swart, B., Banham, A., Barry, S., Beare, A., Bensussan, A., Boumsell, L., C, D.B., Buhring, H.J., Clark, G., Engel, P., Fox, D., Jin, B.Q., Macardle, P.J., Malavasi, F., Mason, D., Stockinger, H. and Yang, X. (2007) CD molecules 2006--human cell differentiation molecules. *J Immunol Methods* 319, 1-5.

Zola, H., Swart, B., Boumsell, L. and Mason, D.Y. (2003) Human Leucocyte Differentiation Antigen nomenclature: update on CD nomenclature. Report of IUIS/WHO Subcommittee. *J Immunol Methods* 275, 1-8.

Zola, H., Swart, B., Nicholson, I., Aasted, B., Bensussan, A., Boumsell, L., Buckley, C., Clark, G., Drbal, K., Engel, P., Hart, D., Horejsi, V., Isacke, C., Macardle, P., Malavasi, F., Mason, D., Olive, D., Saalmueller, A., Schlossman, S.F., Schwartz-Albiez, R., Simmons, P., Tedder, T.F., Ugucioni, M. and Warren, H. (2005) CD molecules 2005: human cell differentiation molecules. *Blood* 106, 3123-6.

Zola, H. and Swart, B.W. (2003) Human leucocyte differentiation antigens. *Trends Immunol* 24, 353-4.