

## Reference list

# Autoimmunity research

## Rheumatoid arthritis

**Sattler, A. et al. (2009) Cytokine-induced human IFN- $\gamma$ -secreting effector-memory T<sub>H</sub> cells in chronic autoimmune inflammation. *Blood* 113: 1948–1956.**

Isolation of naive T helper cells using the CD4 MultiSort Kit in conjunction with CD45RA MicroBeads. Isolation of monocytes with CD14 MicroBeads.

**Frey, O. et al. (2005) The role of regulatory T cells in antigen-induced arthritis: aggravation of arthritis after depletion and amelioration after transfer of CD4<sup>+</sup>CD25<sup>+</sup> T cells. *Arthritis Res. Ther.* 7: R291–R301.**

Sequential isolation of CD4<sup>+</sup>CD25<sup>+</sup> and CD4<sup>+</sup>CD25<sup>-</sup> mouse T cells from spleen and lymph nodes.

**Fujikado, N. et al. (2009) DCIR deficiency causes development of autoimmune diseases in mice due to excess expansion of dendritic cells. *Nature Med.* 14: 176–180.**

Automated isolation of mouse CD4<sup>+</sup>CD25<sup>+</sup> regulatory T cells and CD11c<sup>+</sup> bone marrow-derived dendritic cells.

**Tada, Y. et al. (2008) Toll-like receptor homolog RP105 modulates the antigen-presenting cell function and regulates the development of collagen-induced arthritis. *Arthritis Res. Ther.* 10: R121.**

Isolation of CD4<sup>+</sup>CD25<sup>+</sup> regulatory T cells using the CD4<sup>+</sup>CD25<sup>+</sup> Regulatory T Cell Isolation Kit; isolation of CD11c<sup>+</sup> dendritic cells from mouse spleen. Identification of plasmacytoid dendritic cells by flow cytometry using anti-mPDCA-1 and B220 antibodies.

**Komano, Y. et al. (2006) Identification of a human peripheral blood monocyte subset that differentiates into osteoclasts. *Arthritis Res. Ther.* 8: R152.**

Isolation of CD16<sup>+</sup> and CD16<sup>-</sup> monocyte subsets from PBMCs using the Monocyte Isolation Kit II and CD16 MicroBeads. For direct isolation of monocytes CD14 MicroBeads were used.

**Zhao, B. et al. (2009) Interferon regulatory factor-8 regulates bone metabolism by suppressing osteoclastogenesis. *Nature Med.* 15: 1066–1071.**

Isolation of monocytes from PBMCs using CD14 MicroBeads for the *in vitro* differentiation of osteoclasts.

**Fujii, H. et al. (2009) Telomerase insufficiency in rheumatoid arthritis. *Proc. Natl. Acad. Sci. USA* 106: 4360–4365.**

Isolation of T cell subsets from PBMCs using CD45RO MicroBeads, CD45RA MicroBeads, CD4 MicroBeads, and CD71 MicroBeads, respectively.

**Roelofs, M. F. et al. (2009) Type I interferons might form the link between Toll-like receptor (TLR) 3/7 and TLR4-mediated synovial inflammation in rheumatoid arthritis (RA). *Ann. Rheum. Dis.* 68: 1486–1493.**

Isolation of monocytes using CD14 MicroBeads.

**Brentano, F. (2009) Abundant expression of the interleukin (IL)23 subunit p19, but low levels of bioactive IL23 in the rheumatoid synovium: differential expression and Toll-like receptor (TLR) dependent regulation of the IL23 subunits, p19 and p40, in rheumatoid arthritis. *Ann. Rheum. Dis.* 68: 143–150.**

Positive selection of T cells and monocytes from PBMCs with CD8 MicroBeads and CD14 MicroBeads, respectively.

## Psoriasis

**Yu, C. F. et al. (2010) Human plasmacytoid dendritic cells support T<sub>H</sub>17 cell effector function in response to TLR7 ligation. *J. Immunol.* 184: 1159–1167.**

Automated isolation of naive CD4<sup>+</sup>CD45RA<sup>+</sup>CD45RO<sup>-</sup> T cells, untouched CD4<sup>+</sup>CD45RO<sup>+</sup>CD45RA<sup>+</sup> T cells, and plasmacytoid dendritic cells from PBMCs.

**Carbone, T. et al. (2010) CD56<sup>high</sup>CD16<sup>-</sup>CD62L<sup>-</sup> NK cells accumulate in allergic contact dermatitis and contribute to the expression of allergic responses. *J. Immunol.* 184: 1159–1167.**

Sequential isolations of monocytes, CD16<sup>+</sup> and CD16<sup>-</sup> NK cell subsets from PBMCs derived from healthy and allergic individuals using CD14 MicroBeads, the NK Cell Isolation Kit, and CD16 MicroBeads.

**Wang, H. et al. (2009) Targeting NF- $\kappa$ B with a natural triterpenoid alleviates skin inflammation in a mouse model of psoriasis. *J. Immunol.* 183: 4755–4763.**

Isolation of untouched T cells using the Pan T Cell Isolation Kit.

**Voo, K. S. et al. (2009) Identification of IL-17-producing FoxP3<sup>+</sup> regulatory T cells in humans. *Proc. Natl. Acad. Sci. USA* 106: 4793–4798.**

CD4<sup>+</sup> T Cell Isolation Kit II and Anti-Biotin MicroBeads were combined for the untouched isolation of T helper cells with subsequent isolation of CD4<sup>+</sup>CRTH2<sup>+</sup> T helper cell subsets from peripheral blood.

**Hurtado, P. and Peh, C. A. (2009) LL-37 promotes rapid sensing of CpG oligodeoxynucleotides by B lymphocytes and plasmacytoid dendritic cells. *J. Immunol.* 184: 1425–1435.**

Direct isolation of plasmacytoid dendritic cells from PBMCs using the CD304 (BDCA-4/Neuropilin-1) MicroBead Kit.

**Albanesi, C. et al. (2009) Chemerin expression marks early psoriatic skin lesions and correlates with plasmacytoid dendritic cell recruitment. *J. Exp. Med.* 206: 249–258.**

Immunohistochemical staining of CD303 (BDCA-2)<sup>+</sup> plasmacytoid dendritic cells in early psoriatic skin lesions.

## Diabetes

**Allen, J. S. et al. (2009) Plasmacytoid dendritic cells are proportionally expanded at diagnosis of type 1 diabetes and enhance islet autoantigen presentation to T cells through immune complex capture. *Diabetes* 58: 138–145.**

Enumeration of blood dendritic cell subsets using the Blood Dendritic Cell Enumeration Kit. Automated isolation of myeloid and plasmacytoid dendritic cell subsets using the CD1c (BDCA-1)<sup>+</sup> Dendritic Cell Isolation Kit and the CD304 (BDCA-4/Neuropilin-1) MicroBead Kit, respectively.

**Sgouroudis, E. et al. (2008) Impact of protective IL-2 allelic variants on CD4 FoxP3 regulatory T cell function *in situ* and resistance to autoimmune diabetes in NOD mice. *J. Immunol.* 181: 6283–6292.**

Automated isolation of mouse CD4<sup>+</sup>, CD4<sup>+</sup>CD25<sup>+</sup>, CD4<sup>+</sup>CD25<sup>-</sup> T cells and regulatory T cells.

**Karumuthil-Melethil, S. et al. (2008) Induction of innate immune response through TLR2 and dectin 1 prevents type 1 diabetes. *J. Immunol.* 181: 8323–8334.**

Antigen-presenting cell-dependent promotion of regulatory T cell function using CD4<sup>+</sup> and CD4<sup>+</sup>CD25<sup>+</sup> T cell separation reagents as well as CD11c MicroBeads and indirect isolation strategies for the selection of F4/80<sup>+</sup> macrophages.

**Darrasse-Jèze, G. et al. (2009) Feedback control of regulatory T cell homeostasis by dendritic cells *in vivo*. *J. Exp. Med.* 206: 1853–1862.**

Identification of mouse PDCs by anti-mPDCA-1 antibody staining and separation of CD4<sup>+</sup> T cells and CD4<sup>+</sup>CD25<sup>+</sup> T regs used in adoptive transfer experiments.

**Hamilton-Williams, E. E. et al. (2009) Expression of diabetes-associated genes by dendritic cells and CD4 T cells drives the loss of tolerance in nonobese diabetic mice. *J. Immunol.* 183: 1533–1541.**

Analysis of diabetes-associated gene expression by mouse dendritic cells and T cells leads to deletion of islet antigen-specific autoreactive CD8<sup>+</sup> T cells.

## Systemic lupus erythematosus

**Basu, D. et al. (2009) Stimulatory and inhibitory killer Ig-like receptor molecules are expressed and functional on lupus T cells. *J. Immunol.* 182: 3481–3487.**

Sequential sorting of T cell subsets using the Pan T Cell Isolation Kit, followed by either CD4 or CD8 T cell isolation. KIR genotypes were determined with the KIR Typing Kit.

**Lourenço, E. V. et al. (2009) Modulation of p38 MAPK activity in regulatory T cells after tolerance with anti-DNA Ig peptide in (NZB x NZW) F1 lupus mice. *J. Immunol.* 182: 7415–7421.**

Automated isolation and enumeration of mouse regulatory T cells

**Dai, Z. et al. (2009) Normally occurring NKG2D<sup>+</sup>CD4<sup>+</sup> T cells are immunosuppressive and inversely correlated with disease activity in juvenile-onset lupus. *J. Exp. Med.* 206: 793–805.**

Isolation of human monocytes, B cells, and T cells and stimulation with CMV pp65 – Recombinant Protein for antigen-specific memory T cell response analysis.

**Nakano, S. et al. (2008) Role of pathogenic auto-antibody production by Toll-like receptor 9 of B cells in active systemic lupus erythematosus. *Rheumatology* 47: 145–149.**

Automated positive selection of peripheral blood B cells using the autoMACS<sup>®</sup> Separator and CD19 MicroBeads.

## Multiple sclerosis

**Maier, L. M. et al. (2009) Soluble IL-2RA levels in multiple sclerosis subjects and the effect of soluble IL-2RA on immune responses. J. Immunol. 182: 1541–1547.**

Isolation of CD4<sup>+</sup> T helper cells and CD4<sup>+</sup>CD25<sup>-</sup> regulatory T cells with the CD4<sup>+</sup> T Cell Isolation Kit II and the CD4<sup>+</sup>CD25<sup>-</sup> Regulatory T Cell Isolation Kit.

**Klotz, L. et al. (2009) The nuclear receptor PPAR $\gamma$  selectively inhibits T<sub>H</sub>17 differentiation in a T cell–intrinsic fashion and suppresses CNS autoimmunity. J. Exp. Med. 206: 2079–2089.**

Isolation of CD4<sup>+</sup> CD45RA<sup>+</sup> T cells from PBMCs using the Naive CD4<sup>+</sup> T Cell Isolation Kit II.

**Jones, J. L. et al. (2009) IL-21 drives secondary autoimmunity in patients with multiple sclerosis, following therapeutic lymphocyte depletion with alemtuzumab (Campath-1H). J. Clin. Invest. 119: 2052–2061.**

Direct isolation of T cells, B cells, and monocytes from PBMCs with CD3 MicroBeads, CD19 MicroBeads, and CD14 MicroBeads, respectively.

**Coisne, C. et al. (2009) Cutting Edge: Natalizumab blocks adhesion but not initial contact of human T cells to the blood-brain barrier *in vivo* in an animal model of multiple sclerosis. J. Immunol. 182: 5909–5913.**

Isolation of T cells from PBMCs using the Pan T Cell Isolation Kit II.

**Farez, M. F. et al. (2009) Toll-like receptor 2 and poly(ADP-ribose) polymerase 1 promote central nervous system neuroinflammation in progressive EAE. Nat. Immunol. 10: 958–964.**

Isolation of human monocytes using the Monocyte Isolation Kit II.

**Bielekova, B. et al. (2006) Regulatory CD56<sup>bright</sup> natural killer cells mediate immunomodulatory effects of IL-2Ra-targeted therapy (daclizumab) in multiple sclerosis. Proc. Natl. Acad. Sci. USA 103: 5941–5946.**

PBMCs were NK cell–depleted using CD56 MicroBeads while NK cells and T cells were isolated from fresh or cryopreserved apheresis samples with the NK Cell Isolation Kit II and the T Cell Isolation Kit II, respectively.

Last update: March 2010



Miltenyi Biotec provides products and services worldwide. Visit [www.miltenyibiotec.com/local](http://www.miltenyibiotec.com/local) to find your nearest Miltenyi Biotec contact.

autoMACS and MACS are registered trademarks of Miltenyi Biotec GmbH. Unless otherwise specifically indicated, Miltenyi Biotec products and services are for research use only and not for therapeutic or diagnostic use. Copyright © 2010 Miltenyi Biotec GmbH. All rights reserved.