

**Prof. Dr. rer. nat. Friederike Berberich-Siebelt**  
**peer reviewed publications (til 2024)**

1. Seefried M, Hundhausen N, Kroeger I, Buttner-Herold M, Hoffmann P, Edinger M, Ullrich E, **Berberich-Siebelt F**, Britt WJ, Mach M, Winkler TH. Murine cytomegalovirus reactivation concomitant with acute graft-versus-host disease is controlled by antibodies. *JCI Insight*: 2023; 8(5).
2. Seal R, Schwab LSU, Chiarolla CM, Hundhausen N, Klose GH, Reu-Hofer S, Rosenwald A, Wiest J, **Berberich-Siebelt F**. Delayed and limited administration of the JAKinib tofacitinib mitigates chronic DSS-induced colitis. *Front Immunol*: 2023; 14:1179311.
3. Giampaolo S, Chiarolla CM, Knopper K, Vaeth M, Klein M, Muhammad A, Bopp T, **Berberich-Siebelt F**, Patra AK, Serfling E, Klein-Hessling S. NFATc1 induction by an intronic enhancer restricts NKT gammadelta cell formation. *iScience*: 2023; 26(3):106234.
4. Xiao Y, Qureischi M, Dietz L, Vaeth M, Vallabhapurapu SD, Klein-Hessling S, Klein M, Liang C, Konig A, Serfling E, Mottok A, Bopp T, Rosenwald A, Buttmann M, Berberich I, Beilhack A, **Berberich-Siebelt F**. Lack of NFATc1 SUMOylation prevents autoimmunity and alloreactivity. *J Exp Med*: 2021; 218(1):1-22.
5. Romero-Olmedo AJ, Schulz AR, Huber M, Brehm CU, Chang HD, Chiarolla CM, Bopp T, Skevaki C, **Berberich-Siebelt F**, Radbruch A, Mei HE, Lohoff M. Deep phenotypical characterization of human CD3(+) CD56(+) T cells by mass cytometry. *Eur J Immunol*: 2021; 51(3):672-681.
6. Majumder S, Jugovic I, Saul D, Bell L, Hundhausen N, Seal R, Beilhack A, Rosenwald A, Mougiakakos D, **Berberich-Siebelt F**. Rapid and Efficient Gene Editing for Direct Transplantation of Naive Murine Cas9(+) T Cells. *Front Immunol*: 2021; 12:683631.
7. Koenig A, Vaeth M, Xiao Y, Chiarolla CM, Erapaneedi R, Klein M, Dietz L, Hundhausen N, Majumder S, Schuessler F, Bopp T, Klein-Hessling S, Rosenwald A, Berberich I, **Berberich-Siebelt F**. NFATc1/alphaA and Blimp-1 Support the Follicular and Effector Phenotype of Tregs. *Front Immunol*: 2021; 12:791100.
8. Karl F, Hudecek M, **Berberich-Siebelt F**, Mackensen A, Mougiakakos D. T-Cell Metabolism in Graft Versus Host Disease. *Front Immunol*: 2021; 12:760008.
9. Joshi H, Lunz B, Peters A, Zolch M, Berberich I, **Berberich-Siebelt F**. The extreme C-terminus of IRAK2 assures full TRAF6 ubiquitination and optimal TLR signaling. *Mol Immunol*: 2021; 134:172-182.
10. Bartsch YC, Eschweiler S, Leliavski A, Lundin HB, Wagt S, Petry J, Lilienthal GM, Rahmoller J, de Haan N, Holscher A, Erapaneedi R, Giannou AD, Aly L, Sato R, de Neef LA, Winkler A, Braumann D, Hobusch J, Kuhnigk K, Kremer V, Steinhaus M, Blanchard V, Gemoll T, Habermann JK, Collin M, Salinas G, Manz RA, Fukuyama H, Korn T, Waisman A, Yogev N, Huber S, Rabe B, Rose-John S, Busch H, **Berberich-Siebelt F**, Holscher C, Wuhrer M, Ehlers M. IgG Fc sialylation is regulated during the germinal center reaction following immunization with different adjuvants. *J Allergy Clin Immunol*: 2020; 146(3):652-666 e611.
11. Bell L, Lenhart A, Rosenwald A, Monoranu CM, **Berberich-Siebelt F**. Lymphoid Aggregates in the CNS of Progressive Multiple Sclerosis Patients Lack Regulatory T Cells. *Front Immunol*: 2019; 10:3090.
12. Kuai Y, Gong X, Ding L, Li F, Lei L, Gong Y, Liu Q, Tan H, Zhang X, Liu D, Ren G, Pan H, Shi Y, **Berberich-Siebelt F**, Mao Z, Zhou R. Wilms' tumor 1-associating protein plays an aggressive role in diffuse large B-cell lymphoma and forms a complex with BCL6 via Hsp90. *Cell Commun Signal*: 2018; 16(1):50.
13. Vaeth M, Maus M, Klein-Hessling S, Freinkman E, Yang J, Eckstein M, Cameron S, Turvey SE, Serfling E, **Berberich-Siebelt F**, Possemato R, Feske S. Store-Operated Ca(2+) Entry Controls

- Clonal Expansion of T Cells through Metabolic Reprogramming. *Immunity*: 2017: 47(4):664-679 e666.
14. Man K, Gabriel SS, Liao Y, Gloury R, Preston S, Henstridge DC, Pellegrini M, Zehn D, **Berberich-Siebelt F**, Febbraio MA, Shi W, Kallies A. Transcription Factor IRF4 Promotes CD8(+) T Cell Exhaustion and Limits the Development of Memory-like T Cells during Chronic Infection. *Immunity*: 2017: 47(6):1129-1141 e1125.
  15. Klein-Hessling S, Muhammad K, Klein M, Pusch T, Rudolf R, Floter J, Qureischi M, Beilhack A, Vaeth M, Kummerow C, Backes C, Schoppmeyer R, Hahn U, Hoth M, Bopp T, **Berberich-Siebelt F**, Patra A, Avots A, Muller N, Schulze A, Serfling E. NFATc1 controls the cytotoxicity of CD8+ T cells. *Nat Commun*: 2017: 8(1):511.
  16. Campos Carrascosa L, Klein M, Kitagawa Y, Luckel C, Marini F, Konig A, Guralnik A, Raifer H, Hagner-Benes S, Radler D, Bock A, Kang C, Lohoff M, Garn H, Schaub B, **Berberich-Siebelt F**, Sakaguchi S, Bopp T, Huber M. Reciprocal regulation of the IL9 locus by counteracting activities of transcription factors IRF1 and IRF4. *Nat Commun*: 2017: 8:15366.
  17. Vaeth M, Eckstein M, Shaw PJ, Kozhaya L, Yang J, **Berberich-Siebelt F**, Clancy R, Unutmaz D, Feske S. Store-Operated Ca(2+) Entry in Follicular T Cells Controls Humoral Immune Responses and Autoimmunity. *Immunity*: 2016: 44(6):1350-1364.
  18. Stauss D, Brunner C, **Berberich-Siebelt F**, Hopken UE, Lipp M, Muller G. The transcriptional coactivator Bob1 promotes the development of follicular T helper cells via Bcl6. *EMBO J*: 2016: 35(8):881-898.
  19. Shi Y, Kuai Y, Lei L, Weng Y, **Berberich-Siebelt F**, Zhang X, Wang J, Zhou Y, Jiang X, Ren G, Pan H, Mao Z, Zhou R. The feedback loop of LITAF and BCL6 is involved in regulating apoptosis in B cell non-Hodgkin's-lymphoma. *Oncotarget*: 2016: 7(47):77444-77456.
  20. Schuette V, Embgenbroich M, Ulas T, Welz M, Schulte-Schrepping J, Draffehn AM, Quast T, Koch K, Nehring M, Konig J, Zweynert A, Harms FL, Steiner N, Limmer A, Forster I, **Berberich-Siebelt F**, Knolle PA, Wohlleber D, Kolanus W, Beyer M, Schultze JL, Burgdorf S. Mannose receptor induces T-cell tolerance via inhibition of CD45 and up-regulation of CTLA-4. *Proc Natl Acad Sci U S A*: 2016: 113(38):10649-10654.
  21. Chopra M, Biehl M, Steinfatt T, Brandl A, Kums J, Amich J, Vaeth M, Kuen J, Holtappels R, Podlech J, Mottok A, Kraus S, Jordan-Garrote AL, Bauerlein CA, Brede C, Ribechini E, Fick A, Seher A, Polz J, Ottmuller KJ, Baker J, Nishikii H, Ritz M, Mattenheimer K, Schwinn S, Winter T, Schafer V, Krappmann S, Einsele H, Muller TD, Reddehase MJ, Lutz MB, Mannel DN, **Berberich-Siebelt F**, Wajant H, Beilhack A. Exogenous TNFR2 activation protects from acute GvHD via host T reg cell expansion. *J Exp Med*: 2016: 213(9):1881-1900.
  22. Vogel SZ, Schlickeiser S, Jurchott K, Akyuez L, Schumann J, Appelt C, Vogt K, Schroder M, Vaeth M, **Berberich-Siebelt F**, Lutz MB, Grutz G, Sawitzki B. TCAIM Decreases T Cell Priming Capacity of Dendritic Cells by Inhibiting TLR-Induced Ca2+ Influx and IL-2 Production. *J Immunol*: 2015: 194(7):3136-3146.
  23. Vaeth M, Bauerlein CA, Pusch T, Findeis J, Chopra M, Mottok A, Rosenwald A, Beilhack A, **Berberich-Siebelt F**. Selective NFAT targeting in T cells ameliorates GvHD while maintaining antitumor activity. *Proc Natl Acad Sci U S A*: 2015: 112(4):1125-1130.
  24. Pletinckx K, Vaeth M, Schneider T, Beyersdorf N, Hunig T, **Berberich-Siebelt F**, Lutz MB. Immature dendritic cells convert anergic nonregulatory T cells into Foxp3(-) IL-10(+) regulatory T cells by engaging CD28 and CTLA-4. *Eur J Immunol*: 2015: 45(2):480-491.
  25. Haarmann A, Nowak E, Deiss A, van der Pol S, Monoranu CM, Kooij G, Muller N, van der Valk P, Stoll G, de Vries HE, **Berberich-Siebelt F**, Buttmann M. Soluble VCAM-1 impairs human brain endothelial barrier integrity via integrin alpha-4-transduced outside-in signalling. *Acta Neuropathol*: 2015: 129(5):639-652.

26. Dietz L, Frommer F, Vogel AL, Vaeth M, Serfling E, Waisman A, Buttmann M, **Berberich-Siebelt F.** NFAT1 deficit and NFAT2 deficit attenuate EAE via different mechanisms. *Eur J Immunol*: 2015: 45(5):1377-1389.
27. Vaeth M, Muller G, Stauss D, Dietz L, Klein-Hessling S, Serfling E, Lipp M, Berberich I, **Berberich-Siebelt F.** Follicular regulatory T cells control humoral autoimmunity via NFAT2-regulated CXCR5 expression. *J Exp Med*: 2014: 211(3):545-561.
28. Schumann J, Stanko K, Woertge S, Appelt C, Schumann M, Kuhl AA, Panov I, Schliesser U, Vogel S, Ahrlich S, Vaeth M, **Berberich-Siebelt F.**, Waisman A, Sawitzki B. The mitochondrial protein TCAIM regulates activation of T cells and thereby promotes tolerance induction of allogeneic transplants. *Am J Transplant*: 2014: 14(12):2723-2735.
29. Mueller K, Quandt J, Marienfeld RB, Weihrich P, Fiedler K, Claussnitzer M, Laumen H, Vaeth M, **Berberich-Siebelt F.**, Serfling E, Wirth T, Brunner C. Octamer-dependent transcription in T cells is mediated by NFAT and NF-kappaB. *Nucleic Acids Res*: 2013: 41(4):2138-2154.
30. Hock M, Vaeth M, Rudolf R, Patra AK, Pham DA, Muhammad K, Pusch T, Bopp T, Schmitt E, Rost R, **Berberich-Siebelt F.**, Tyrsin D, Chuvpilo S, Avots A, Serfling E, Klein-Hessling S. NFATc1 induction in peripheral T and B lymphocytes. *J Immunol*: 2013: 190(5):2345-2353.
31. Vaeth M, Schliesser U, Muller G, Reissig S, Satoh K, Tuettenberg A, Jonuleit H, Waisman A, Muller MR, Serfling E, Sawitzki BS, **Berberich-Siebelt F.**. Dependence on nuclear factor of activated T-cells (NFAT) levels discriminates conventional T cells from Foxp3+ regulatory T cells. *Proc Natl Acad Sci U S A*: 2012: 109(40):16258-16263.
32. Serfling E, Avots A, Klein-Hessling S, Rudolf R, Vaeth M, **Berberich-Siebelt F.** NFATc1/alphaA: The other Face of NFAT Factors in Lymphocytes. *Cell Commun Signal*: 2012: 10(1):16.
33. Klein M, Vaeth M, Scheel T, Grabbe S, Baumgrass R, **Berberich-Siebelt F.**, Bopp T, Schmitt E, Becker C. Repression of cyclic adenosine monophosphate upregulation disarms and expands human regulatory T cells. *J Immunol*: 2012: 188(3):1091-1097.
34. Benkert TF, Dietz L, Hartmann EM, Leich E, Rosenwald A, Serfling E, Buttmann M, **Berberich-Siebelt F.** Natalizumab exerts direct signaling capacity and supports a pro-inflammatory phenotype in some patients with multiple sclerosis. *PLoS One*: 2012: 7(12):e52208.
35. Vaeth M, Gogishvili T, Bopp T, Klein M, **Berberich-Siebelt F.**, Gattenloehner S, Avots A, Sparwasser T, Grebe N, Schmitt E, Hunig T, Serfling E, Bodor J. Regulatory T cells facilitate the nuclear accumulation of inducible cAMP early repressor (ICER) and suppress nuclear factor of activated T cell c1 (NFATc1). *Proc Natl Acad Sci U S A*: 2011: 108(6):2480-2485.
36. Bhattacharyya S, Deb J, Patra AK, Thuy Pham DA, Chen W, Vaeth M, **Berberich-Siebelt F.**, Klein-Hessling S, Lamperti ED, Reifenberg K, Jellusova J, Schweizer A, Nitschke L, Leich E, Rosenwald A, Brunner C, Engelmann S, Bommhardt U, Avots A, Muller MR, Kondo E, Serfling E. NFATc1 affects mouse splenic B cell function by controlling the calcineurin-NFAT signaling network. *J Exp Med*: 2011: 208(4):823-839.
37. **Berberich-Siebelt F.**, Avots A, Serfling E. Transcriptional programming in the immune system: report on the International Workshop of the Transregio TR52, November 17-20, 2010 in Wurzburg, Germany. *Eur J Immunol*: 2011: 41(4):885-888.
38. Azukizawa H, Dohler A, Kanazawa N, Nayak A, Lipp M, Malissen B, Autenrieth I, Katayama I, Riemann M, Weih F, **Berberich-Siebelt F.**, Lutz MB. Steady state migratory RelB(+) langerin(+) dermal dendritic cells mediate peripheral induction of antigen-specific CD4(+) CD25(+) Foxp3(+) regulatory T cells. *Eur J Immunol*: 2011: 41(5):1420-1434.
39. Nayak A, Glockner-Pagel J, Vaeth M, Schumann JE, Buttmann M, Bopp T, Schmitt E, Serfling E, **Berberich-Siebelt F.** Sumoylation of the transcription factor NFATc1 leads to its subnuclear relocalization and interleukin-2 repression by histone deacetylase. *J Biol Chem*: 2009: 284(16):10935-10946.

40. Schmidt D, Nayak A, Schumann JE, Schimpl A, Berberich I, **Berberich-Siebelt F**. Blimp-1Deltaexon7: a naturally occurring Blimp-1 deletion mutant with auto-regulatory potential. *Exp Cell Res*: 2008; 314(20):3614-3627.
41. Serfling E, **Berberich-Siebelt F**, Avots A. NFAT in lymphocytes: A factor for all events? *Science*: 2007; 2007(398):42.
42. Buttmann M, **Berberich-Siebelt F**, Serfling E, Rieckmann P. Interferon-beta is a potent inducer of interferon regulatory factor-1/2-dependent IP-10/CXCL10 expression in primary human endothelial cells. *J Vasc Res*: 2007; 44(1):51-60.
43. Santner-Nanan B, **Berberich-Siebelt F**, Xiao Z, Poser N, Sennefelder H, Rauthe S, Vallabhapurapu DS, Berberich I, Schimpl A, Kreth H-W, Nanan R. Blimp-1 is expressed in human and mouse T cell subsets and leads to loss of IL-2 production and to defective proliferation. *Signal Transduction*: 2006; 6:268-279.
44. **Berberich-Siebelt F**, Berberich I, Andrulis M, Santner-Nanan B, Jha MK, Klein-Hessling S, Schimpl A, Serfling E. SUMOylation interferes with CCAAT/enhancer-binding protein beta-mediated c-myc repression, but not IL-4 activation in T cells. *J Immunol*: 2006; 176(8):4843-4851.
45. Buttmann M, Goebeler M, Toksoy A, Schmid S, Graf W, **Berberich-Siebelt F**, Rieckmann P. Subcutaneous interferon-beta injections in patients with multiple sclerosis initiate inflammatory skin reactions by local chemokine induction. *J Neuroimmunol*: 2005; 168(1-2):175-182.
46. Wurzer WJ, Ehrhardt C, Pleschka S, **Berberich-Siebelt F**, Wolff T, Walczak H, Planz O, Ludwig S. NF-kappaB-dependent induction of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) and Fas/FasL is crucial for efficient influenza virus propagation. *J Biol Chem*: 2004; 279(30):30931-30937.
47. Serfling E, **Berberich-Siebelt F**, Avots A, Chuvpilo S, Klein-Hessling S, Jha MK, Kondo E, Pagel P, Schulze-Luehrmann J, Palmethofer A. NFAT and NF-kappaB factors-the distant relatives. *Int J Biochem Cell Biol*: 2004; 36(7):1166-1170.
48. Planz O, Pleschka S, Oesterle K, **Berberich-Siebelt F**, Ehrhardt C, Stitz L, Ludwig S. Borna disease virus nucleoprotein interacts with the CDC2-cyclin B1 complex. *J Virol*: 2003; 77(20):11186-11192.
49. Klein-Hessling S, Jha MK, Santner-Nanan B, **Berberich-Siebelt F**, Baumruker T, Schimpl A, Serfling E. Protein kinase A regulates GATA-3-dependent activation of IL-5 gene expression in Th2 cells. *J Immunol*: 2003; 170(6):2956-2961.
50. Chuvpilo S, Jankevics E, Tyrsin D, Akimzhanov A, Moroz D, Jha MK, Schulze-Luehrmann J, Santner-Nanan B, Feoktistova E, Konig T, Avots A, Schmitt E, **Berberich-Siebelt F**, Schimpl A, Serfling E. Autoregulation of NFATc1/A expression facilitates effector T cells to escape from rapid apoptosis. *Immunity*: 2002; 16(6):881-895.
51. von Gise A, Lorenz P, Wellbrock C, Hemmings B, **Berberich-Siebelt F**, Rapp UR, Troppmair J. Apoptosis suppression by Raf-1 and MEK1 requires MEK- and phosphatidylinositol 3-kinase-dependent signals. *Mol Cell Biol*: 2001; 21(7):2324-2336.
52. Marienfeld R, **Berberich-Siebelt F**, Berberich I, Denk A, Serfling E, Neumann M. Signal-specific and phosphorylation-dependent RelB degradation: a potential mechanism of NF-kappaB control. *Oncogene*: 2001; 20(56):8142-8147.
53. Serfling E, **Berberich-Siebelt F**, Chuvpilo S, Jankevics E, Klein-Hessling S, Twardzik T, Avots A. The role of NF-AT transcription factors in T cell activation and differentiation. *Biochim Biophys Acta*: 2000; 1498(1):1-18.
54. **Berberich-Siebelt F**, Klein-Hessling S, Hepping N, Santner-Nanan B, Lindemann D, Schimpl A, Berberich I, Serfling E. C/EBPbeta enhances IL-4 but impairs IL-2 and IFN-gamma induction in T cells. *Eur J Immunol*: 2000; 30(9):2576-2585.

55. Kuss AW, Knodel M, **Berberich-Siebelt F**, Lindemann D, Schimpl A, Berberich I. A1 expression is stimulated by CD40 in B cells and rescues WEHI 231 cells from anti-IgM-induced cell death. *Eur J Immunol*: 1999; 29(10):3077-3088.
56. Chuvpilo S, Zimmer M, Kerstan A, Glockner J, Avots A, Escher C, Fischer C, Inashkina I, Jankevics E, **Berberich-Siebelt F**, Schmitt E, Serfling E. Alternative polyadenylation events contribute to the induction of NF-ATc in effector T cells. *Immunity*: 1999; 10(2):261-269.
57. Chuvpilo S, Avots A, **Berberich-Siebelt F**, Glockner J, Fischer C, Kerstan A, Escher C, Inashkina I, Hlubek F, Jankevics E, Brabletz T, Serfling E. Multiple NF-ATc isoforms with individual transcriptional properties are synthesized in T lymphocytes. *J Immunol*: 1999; 162(12):7294-7301.
58. Schuh K, Kneitz B, Heyer J, Bommhardt U, Jankevics E, **Berberich-Siebelt F**, Pfeffer K, Muller-Hermelink HK, Schimpl A, Serfling E. Retarded thymic involution and massive germinal center formation in NF-ATp-deficient mice. *Eur J Immunol*: 1998; 28(8):2456-2466.
59. **Siebelt F**, Berberich I, Shu G, Serfling E, Clark EA. Role for CD40-mediated activation of c-Rel and maintenance of c-myc RNA levels in mitigating anti-IgM-induced growth arrest. *Cell Immunol*: 1997; 181(1):13-22.
60. Schuh K, Kneitz B, Heyer J, **Siebelt F**, Fischer C, Jankevics E, Rude E, Schmitt E, Schimpl A, Serfling E. NF-ATp plays a prominent role in the transcriptional induction of Th2-type lymphokines. *Immunol Lett*: 1997; 57(1-3):171-175.
61. Heyer J, Kneitz B, Schuh K, Jankevics E, **Siebelt F**, Schimpl A, Serfling E. Inefficient termination of antigen responses in NF-ATp-deficient mice. *Immunobiology*: 1997; 198(1-3):162-169.
62. Grandori C, Mac J, **Siebelt F**, Ayer DE, Eisenman RN. Myc-Max heterodimers activate a DEAD box gene and interact with multiple E box-related sites in vivo. *EMBO J*: 1996; 15(16):4344-4357.
63. Berberich I, Shu G, **Siebelt F**, Woodgett JR, Kyriakis JM, Clark EA. Cross-linking CD40 on B cells preferentially induces stress-activated protein kinases rather than mitogen-activated protein kinases. *Embo J*: 1996; 15(1):92-101.
64. Brabletz T, Pfeuffer I, Schorr E, **Siebelt F**, Wirth T, Serfling E. Transforming growth factor beta and cyclosporin A inhibit the inducible activity of the interleukin-2 gene in T cells through a noncanonical octamer-binding site. *Mol Cell Biol*: 1993; 13(2):1155-1162.