|  |  |  |  |
| --- | --- | --- | --- |
| **receptor** | **ligand** | **interaction** | **reference** |
| CD27 | CD70 | co-stimulation between T cells and APC or B cells | 1 |
| IL5RA | IL5 | eosinophil development | 2 |
| ST2 = IL1RL1 | IL33 | neural development and response to injury | 3 |
| LTA = TNF-beta | HVEM | T cell survival via NFκB activation | 4 |
| TNFSF14 = LIGHT | HVEM | T cell survival via NFκB activation | 5 |
| IL1A | IL1R2 | suppression of IL-1 signaling by decoy | 6 |
| IL12 | IL12R | differentiation of Th1 T cells | 7 |
| CXCR3 | CXCL10 | Leukocyte trafficking into CNS | 8 |
| ALCAM | CD6 | Leukocyte trafficking into CNS | 9 |

table e-3 ligand-receptor pairs differentially expressed in MS

References:

1. Burchill MA, Tamburini BA, Kedl RM. T cells compete by cleaving cell surface CD27 and blocking access to CD70-bearing APCs. European journal of immunology 2015;45:3140-3149.

2. Dougan M, Dranoff G, Dougan SK. GM-CSF, IL-3, and IL-5 Family of Cytokines: Regulators of Inflammation. Immunity 2019;50:796-811.

3. Fairlie-Clarke K, Barbour M, Wilson C, Hridi SU, Allan D, Jiang HR. Expression and Function of IL-33/ST2 Axis in the Central Nervous System Under Normal and Diseased Conditions. Frontiers in immunology 2018;9:2596.

4. Ware CF, Sedý JR. TNF Superfamily Networks: bidirectional and interference pathways of the herpesvirus entry mediator (TNFSF14). Current opinion in immunology 2011;23:627-631.

5. Bates D, Maechler M, Bolker B, Walker S. Fitting Linear Mixed-Effects Models Using lme4. JSS Journal of Statistical Software

2015;67:1-48.

6. Colotta F, Re F, Muzio M, et al. Interleukin-1 type II receptor: a decoy target for IL-1 that is regulated by IL-4. Science (New York, NY) 1993;261:472-475.

7. Croxford AL, Kulig P, Becher B. IL-12-and IL-23 in health and disease. Cytokine & growth factor reviews 2014;25:415-421.

8. Müller M, Carter S, Hofer MJ, Campbell IL. Review: The chemokine receptor CXCR3 and its ligands CXCL9, CXCL10 and CXCL11 in neuroimmunity--a tale of conflict and conundrum. Neuropathology and applied neurobiology 2010;36:368-387.

9. Michel L, Grasmuck C, Charabati M, et al. Activated leukocyte cell adhesion molecule regulates B lymphocyte migration across central nervous system barriers. Science translational medicine 2019;11.