

Acknowledgments

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1. Van den Eynde, B., Lethé, B., Van Pel, A., De Plaen, E. & Boon, T. The gene coding for a major tumor rejection antigen of tumor P815 is identical to the normal gene of syngeneic DBA/2 mice. *J. Exp. Med.* **173**, 1373–1384 (1991).
2. Van Der Bruggen, P. *et al.* A gene encoding an antigen recognized by cytolytic T lymphocytes on a human melanoma. *Science* **254**, 1643–1647 (1991).
3. Brichard, V. *et al.* The tyrosinase gene codes for an antigen recognized by autologous cytolytic T lymphocytes on HLA-A2 melanomas. *J. Exp. Med.* **178**, 489–495 (1993).
4. Kawakami, Y. *et al.* Cloning of the gene coding for a shared human melanoma antigen recognized by autologous T cells infiltrating into tumor. *Proc. Natl. Acad. Sci. USA* **91**, 3515–3519 (1994).
5. Kawakami, Y. *et al.* Identification of a human melanoma antigen recognized by tumor-infiltrating lymphocytes associated with *in vivo* tumor rejection. *Proc. Natl. Acad. Sci. USA* **91**, 6458–6462 (1994).
6. Boel, P. *et al.* BAGE: A new gene encoding an antigen recognized on human melanomas by cytolytic T lymphocytes. *Immunity* **2**, 167–175 (1995).
7. Bloom, M.B. *et al.* Identification of tyrosinase-related protein 2 as a tumor rejection antigen for the B16 melanoma. *J. Exp. Med.* **185**, 453–459 (1997).
8. Sahasrabudhe, D.M. *et al.* Shared T cell defined antigens on independently derived tumors. *J. Immunol.* **151**, 6302–6310 (1993).
9. Collins, J.L., Patek, P.Q. & Cohn, M. *In vivo* surveillance of tumorigenic cells transformed *in vitro*. *Nature* **299**, 169–171 (1982).
10. Lin, Y., Patek, P.Q., Collins, J.L. & Cohn, M. Analysis of immune surveillance of sequentially derived cell lines that differ in their tumorigenic potential. *J. Natl. Cancer Inst.* **74**,

- 1025–1030 (1985).
11. Moss, B. Vaccinia virus: A tool for research and vaccine development. *Science* **252**, 1662–1667 (1991).
12. Moss, B. Poxvirus expression vectors. *Curr. Topics Microbiol. Immunol.* **158**, 25–38 (1992).
13. Merchinsky, M., Eckert, D., Smith, E. & Zauderer, M. Construction and characterization of vaccinia direct ligation vectors. *Virology* **238**, 444–451 (1997).
14. Somogyi, P., Frazier, J. & Skinner, M. Fowlpox virus host range restriction: Gene expression, DNA replication, and morphogenesis in nonpermissive mammalian cells. *Virology* **197**, 439–444 (1993).
15. Peckham, I., Sobel, S., Comer, J., Jaenisch, R. & Barklis, E. Retrovirus activation in embryonal carcinoma cells by cellular promoters. *Genes Dev.* **3**, 2062–2071 (1989).
16. Parker, K.C., Bednarek, M.A. & Coligan, J.E. Scheme for ranking potential HLA-A2 binding peptides based on independent binding of individual peptide side-chains. *J. Immunol.* **152**, 163 (1994).
17. Kuwano, Y. & Wool, I.G. The primary structure of rat ribosomal protein L3. *Biochem. Biophys. Res. Commun.* **187**, 58–64 (1992).
18. Simonic, T. *et al.* cDNA sequence for bovine ribosomal protein, identified also in many other ribosomal proteins. *Biochem. Biophys. Acta* **1219**, 706–710 (1994).
19. Overwijk, W.W. *et al.* Vaccination with a recombinant vaccinia virus encoding a 'self' antigen induces autoimmune vitiligo and tumor cell destruction in mice: Requirement for CD4<sup>+</sup> T lymphocytes. *Proc. Natl. Acad. Sci. USA* **96**, 2982–2987 (1999).
20. Targoni, O.S. & Lehmann, P.V. Endogenous myelin basic protein inactivates the high avidity T cell repertoire. *J. Exp. Med.* **187**, 2055–2063 (1998).
21. Harrington, C.J. *et al.* Differential tolerance is induced in T cells recognizing distinct epitopes of myelin basic protein. *Immunity* **8**, 571–580 (1998).
22. Olsen, S.R. & Uhler, M.D. Isolation and characterization of cDNA clones for an inhibitor protein of cAMP-dependent Protein Kinase. *J. Biol. Chem.* **266**, 11158–11162 (1991).

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