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Titolo	Introduction to antibody engineering // Florian Ru�lker, Gordana Wozniak-Knopp, editors
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ��2021
ISBN	3-030-54630-6
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (VIII, 388 p. 69 illus., 52 illus. in color.)
Collana	Learning materials in biosciences
Disciplina	615.37
Soggetti	Immunotechnology Immunoglobulins
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction by the editors -- Chapter 2. Antibodies – A History of their Discovery and Properties -- Chapter 3. Monoclonal Antibodies and Hybridomas -- Chapter 4. Antibody Display Systems -- Chapter 5. Transgenic Animals for the Generation of Human Antibodies -- Chapter 6. Applications of Antibodies in Therapy, Diagnosis & Science -- Chapter 7. Bispecific antibodies -- Chapter 8. Antibody-Drug Conjugates -- Chapter 9. Alternative Binding Scaffolds – multipurpose binders for applications in basic research and therapy -- Chapter 10: Chimeric antigen receptor (CAR) redirected T cells -- Chapter 11. Improvement of Key Characteristics of Antibodies -- Chapter 12. Engineering therapeutic antibodies for development -- Chapter 13. Eukaryotic expression systems for upstream pro-cessing of monoclonal antibodies -- Chapter 14. Antibody Validation.
Sommario/riassunto	This highly readable textbook serves as a concise and engaging primer to the emerging field of antibody engineering and its various applications. It introduces readers to the basic science and molecular structure of antibodies, and explores how to characterize and engineer them. Readers will find an overview of the latest methods in antibody identification, improvement and biochemical engineering. Furthermore, alternative antibody formats and bispecific antibodies are discussed. The book’s content is based on lectures for the specializations “Protein

Engineering” and “Medical Biotechnology” within the Master’s curriculum in “Biotechnology.” The lectures have been held at the University of Natural Resources and Life Sciences, Vienna, in cooperation with the Medical University of Vienna, since 2012 and are continuously adapted to reflect the latest developments in the field. The book addresses Master’s and PhD students in biotechnology, molecular biology and immunology, and all those who are interested in antibody engineering.
