



The Most Comprehensive Portfolio of SARS-CoV-2 Reagents

- Recombinant Antibodies
- Sandwich ELISA Pairs
- Recombinant Proteins
- FFPE Cell Pellet Blocks

LEARN MORE <https://www.genetex.com/covid19>

Quality Antibodies • Quality Results



159 (6)

J Immunol 1997; 159:2549-3080; ;
<http://www.jimmunol.org/content/159/6.citation>

This information is current as of October 23, 2020.

Why *The JI*? [Submit online.](#)

- **Rapid Reviews! 30 days*** from submission to initial decision
- **No Triage!** Every submission reviewed by practicing scientists
- **Fast Publication!** 4 weeks from acceptance to publication

*average

- Subscription** Information about subscribing to *The Journal of Immunology* is online at:
<http://jimmunol.org/subscription>
- Permissions** Submit copyright permission requests at:
<http://www.aai.org/About/Publications/JI/copyright.html>
- Email Alerts** Receive free email-alerts when new articles cite this article. Sign up at:
<http://jimmunol.org/alerts>

The Journal of Immunology is published twice each month by
The American Association of Immunologists, Inc.,
1451 Rockville Pike, Suite 650, Rockville, MD 20852
All rights reserved.
Print ISSN: 0022-1767 Online ISSN: 1550-6606.





CUTTING EDGE

- 2549 CD44 Activation and Associated Primary Adhesion Is Inducible via T Cell Receptor Stimulation
Heather C. DeGrendele, Maria Kosfiszter, Pila Estess, and Mark H. Siegelman
- 2554 Isolation and Characterization of Exodus-2, a Novel C-C Chemokine with a Unique 37-Amino Acid Carboxyl-Terminal Extension
Robert Hromas, Chang H. Kim, Michael Klemsz, Mitchell Krathwohl, Kenneth Fife, Scott Cooper, Carol Schnizlein-Bick, and Hal E. Broxmeyer
- 2559 Regulation of Ku Expression in Normal Murine B Cells by Stimuli That Promote Switch Recombination
Piotr Zelazowski, Edward E. Max, Marilyn R. Kehry, and Clifford M. Snapper
- 2563 HEL-Flu: An Influenza Virus Containing the Hen Egg Lysozyme Epitope Recognized by CD4⁺ T Cells from Mice Transgenic for an $\alpha\beta$ TCR
William S. Walker, Maria R. Castrucci, Mark Y. Sangster, Richard T. Carson, and Yoshihiro Kawakita

CELLULAR IMMUNOLOGY AND IMMUNE REGULATION

- 2567 Regulation of Memory CD4 T Cell Adhesion by CD4-MHC Class II Interaction
Daniel P. Metz, Donna L. Farber, Rolf König, and Kim Bottomly
- 2574 Immundominance Is Independent of Structural Constraints: Each Region Within Hen Eggwhite Lysozyme Is Potentially Available Upon Processing of Native Antigen
Kamal J. Moudgil, Debora Sekiguchi, Sue Y. Kim, and Eli E. Sercarz

On the cover: Graphical representations of MHC class I molecules H-2D^b and HLA-A2.1. Identical residues are shown in green. A murine CTL clone (AHI112.2) displays peptide-specific recognition of both of these molecules, and cytolytic assays suggest that these are functionally equivalent epitopes. This TCR appears to make a different, but overlapping, set of contacts with each class I/peptide complex. In this instance, cross-recognition appears to be the result of both shared and complex-specific contacts. (Figure 8 from Loftus, D. J., Y. Chen, D. G. Covell, V. H. Engelhard, and E. Appella. 1997. Differential contact of disparate class I/peptide complexes as the basis for epitope cross-recognition by a single T cell receptor. *J. Immunol.* 158:3651.)

The Journal of Immunology (ISSN 0022-1767) is published twice each month by The American Association of Immunologists, 9650 Rockville Pike, Bethesda, MD 20814. Subscription rates: U.S.A. AND POSSESSIONS: personal, \$225.00; institutional, \$400.00; single copy, \$15.00. FOREIGN (incl. Canada): personal, \$330.00; institutional, \$500.00; single copy, \$20.00. Air Printed Matter rates are available on request from Customer Service, The Journal of Immunology, 9650 Rockville Pike, Bethesda, MD 20814-3998. Indexed by *Current Contents* and *Index Medicus*. Periodicals postage paid at Bethesda, MD 20814 and at additional mailing offices. Country of origin USA. Printed on acid-free recyclable paper. Postmaster: Send address changes to The Journal of Immunology, 9650 Rockville Pike, Bethesda, MD 20814-3998. Copyright © 1997 by The American Association of Immunologists.

- 2580 Immunocompromised Tumor-Bearing Mice Show a Selective Loss of STAT5a/b Expression in T and B Lymphocytes
Federica Pericle, Robert A. Kirken, Vincenzo Bronte, Giuseppe Sconocchia, Luis DaSilva, and David M. Segal
- 2586 Abnormal Regulation of Retinoic Acid Receptor β_2 Expression and Compromised Allograft Rejection in Transgenic Mice Expressing Antisense Sequences to Retinoic Acid Receptor β_1 and β_3
Jacques Bérard, Hongyu Luo, Huifang Chen, Myhala Mukuna, W. Edward C. Bradley, and Jiangping Wu
- 2599 Administration of IL-12 Induces a CD3⁺CD4⁻CD8⁻B220⁺ Lymphoid Population Capable of Eliciting Cytolysis Against Fas-Positive Tumor Cells
Tateki Tsutsui, Jie Mu, Makoto Ogawa, Wen-Gong Yu, Takashi Suda, Shigekazu Nagaga, Fumitaka Saji, Yuji Murata, Hiromi Fujiwara, and Toshiyuki Hamaoka
- 2606 T Cell Receptor Diversity in CTLs Specific for the CTT-1 and CTT-2 Minor Histocompatibility Antigens
Sean L. Johnston and Peter J. Wettstein
- 2616 IL-4-Independent Regulation of In Vivo IL-9 Expression
Philippe Monteyne, Jean-Christophe Renauld, Johan Van Broeck, David W. Dunne, Frank Brombacher, and Jean-Paul Coutelier
- 2624 Functional Effects of Overexpression of Protein Kinase C- α , - β , - δ , - ϵ , and - η in the Mast Cell Line RBL-2H3
En-Yuh Chang, Zoltan Szallasi, Peter Ács, Vivek Raizada, Patricia C. Wolfe, Clare Fewtrell, Peter M. Blumberg, and Juan Rivera
- 2633 Characterization of Anti-Single-Stranded DNA B Cells in a Non-Autoimmune Background
Kim-Anh T. Nguyen, Laura Mandik, Anh Bui, Joshua Kavalier, Amanda Norvell, John G. Monroe, Jessica H. Roark, and Jan Erikson
- 2645 Increased Sensitivity of Gastric Cancer Cells to Natural Killer and Lymphokine-Activated Killer Cells by Antisense Suppression of N-Acetylgalactosaminyltransferase
Takeya Adachi, Yuji Hinoda, Isao Nishimori, Masaaki Adachi, and Kohzoh Imai
- 2652 CD154/CD40 and CD70/CD27 Interactions Have Different and Sequential Functions in T Cell-Dependent B Cell Responses: Enhancement of Plasma Cell Differentiation by CD27 Signaling
Serge Jacquot, Tetsuji Kobata, Satoshi Iwata, Chikao Morimoto, and Stuart F. Schlossman
- 2658 Delay in the Onset of Systemic Lupus Erythematosus Following Treatment With the Immunomodulator AS101: Association With IL-10 Inhibition and Increase in TNF- α Levels
Yona Kalechman, Uzi Gafter, Ji Ping Da, Michael Albeck, Donato Alarcon-Segovia, and Benjamin Sredni
- 2668 Relationship Between Proliferation and Susceptibility to CD95- and CD2-Mediated Apoptosis in Stimulated Primary T Lymphocytes: T Cells Manifesting Proliferative Unresponsiveness Are Preferentially Susceptible to CD95-Mediated Apoptosis
Bertrand Mollereau, Dominique Blanchard, Olivier Déas, Céline Dumont, Didier Métivier, Alain Bernard, Jeffrey T. McGrew, Bernard Charpentier, Aimé Vazquez, and Anna Senik

- 2678 Transcription Factor Egr-1 Activity Down-Regulates Fas and CD23 Expression in B Cells
Adelheid Dinkel, Wilhelm K. Aicher, Christian Haas, Peter F. Zipfel, Hans-Hartmut Peter, and Hermann Eibel
- 2685 Low Affinity of Cell Surface Lymphocyte Function-Associated Antigen-1 (LFA-1) Generates Selectivity for Cell-Cell Interactions
Gauri Ganpule, Ruth Knorr, James M. Miller, Christopher P. Carron, and Michael L. Dustin
- 2693 E-Cadherin-Mediated Adhesion Involving Langerhans Cell-Like Dendritic Cells Expanded from Murine Fetal Skin
Thilo Jakob, Atsushi Saitoh, and Mark C. Udey
- 2702 Phorbol Myristate Acetate Stimulates the Dimerization of CD44 Involving a Cysteine in the Transmembrane Domain
Dacai Liu and Man-Sun Sy
- 2712 Primary B Cell Development Is Impaired in Mice with Defects of the Pituitary/Thyroid Axis
Encarnacion Montecino-Rodriguez, Ross G. Clark, Lyn Powell-Braxton, and Kenneth Dorshkind
- 2720 Introduction of Exogenous Class II *Trans*-Activator in MHC Class II-Deficient ABI Fibroblasts Results in Incomplete Rescue of MHC Class II Antigen Expression
Ad Peijnenburg, Sam J. P. Gobin, Marja C. J. A. van Eggermond, Barbara C. Godthelp, Niels van Graafeiland, and Peter J. van den Elsen
- 2728 Leukocyte Function-Associated Antigen-1-Dependent Lysis of Fas⁺ (CD95⁺/Apo-1⁺) Innocent Bystanders by Antigen-Specific CD8⁺ CTL
Hidefumi Kojima, Koji Eshima, Hajime Takayama, and Michail V. Sitkovsky

MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 2735 Redundant Expression but Selective Utilization of Nuclear Factor of Activated T Cells Family Members
Luika A. Timmerman, James I. Healy, Steffan N. Ho, Lei Chen, Christopher C. Goodnow, and Gerald R. Crabtree
- 2741 Expression in BALB/c and C57BL/6 Mice of Rt6-1 and Rt6-2 ADP-Ribosyltransferases That Differ in Enzymatic Activity: C57BL/6 Rt6-1 is a Natural Transferase Knockout
Toshihiro Kanaitzuka, Rita Bortell, Linda A. Stevens, Joel Moss, Deborah Sardinha, T. V. Rajan, Danny Zipris, John P. Mordes, Dale L. Greiner, and Aldo A. Rossini
- 2750 Novel HY Peptide Antigens Presented by HLA-B27
William A. Simmons, Scott G. Summerfield, Derry C. Roopenian, Clive A. Slaughter, Aamir R. Zuberi, Simon J. Gaskell, Robert S. Bordoli, John Hoyes, Carolyn R. Moomaw, Robert A. Colbert, Louise Y.-W. Leong, Geoffrey W. Butcher, Robert E. Hammer, and Joel D. Taurog
- 2760 The Mouse Genes Encoding the Third Pair of β -Type Proteasome Subunits Regulated Reciprocally by IFN- γ : Structural Comparison, Chromosomal Localization, and Analysis of the Promoter
Masaru Hayashi, Teruo Ishibashi, Keiji Tanaka, and Masanori Kasahara

- 2771 Alternative Peptide Binding Motifs of Qa-2 Class Ib Molecules Define Rules for Binding of Self and Nonself Peptides
Piotr Tabaczewski, Eugene Chiang, Maile Henson, and Iwona Stroynowski
- 2782 Identification of Residues in the Class II-Associated Ii Peptide (CLIP) Region of Invariant Chain That Affect Efficiency of MHC Class II-Mediated Antigen Presentation in an Allele-Dependent Manner
Anand M. Gautam, Maria Yang, Peter J. Milburn, Rohan Baker, Aparna Bhatnagar, James McCluskey, and Tanya Boston
- 2789 Activation and Transdominant Suppression of MHC Class II and HLA-DMB Promoters by a Series of C-Terminal Class II Transactivator Deletion Mutants
Keh-Chuang Chin, Guoxuan Li, and Jenny P.-Y. Ting

HOST DEFENSE

- 2795 MHC Class Ib-Restricted Cells Contribute to Antilisterial Immunity: Evidence for Qa-1^b as a Key Restricting Element for *Listeria*-Specific CTLs
H. G. Archie Bouwer, Michael S. Seaman, James Forman, and David J. Hinrichs
- 2802 Recognition of the Latency-Associated Immediate Early Protein IE63 of Varicella-Zoster Virus by Human Memory T Lymphocytes
Catherine Sadzot-Delvaux, Paul R. Kinchington, Serge Debrus, Bernard Rentier, and Ann M. Arvin
- 2807 Early Neutralizing Antibody Response Against Mouse Mammary Tumor Virus: Critical Role of Viral Infection and Superantigen-Reactive T Cells
Sanjiv A. Luther, Ivan Maillard, Frédéric Luthi, Leonardo Scarpellino, Heidi Diggelmann, and Hans Acha-Orbea
- 2815 Involvement of the *ras*-Like GTPase rab3d in RBL-2H3 Mast Cell Exocytosis Following Stimulation via High Affinity IgE Receptors (FcεRI)
Michèle Roa, Fabienne Paumet, Joëlle Le Mao, Bernard David, and Ulrich Blank
- 2824 Tuberculosis Generates a Microenvironment Enhancing the Productive Infection of Local Lymphocytes by HIV
Valérie Garrait, Jacques Cadranet, Hélène Esvant, Isabelle Herry, Pierre Morinet, Charles Mayaud, and Dominique Israël-Biet
- 2831 Heterogeneity of Biologic Responses of Melanoma-Specific CTL
Jean-François Fonteneau, Eric Le Dréan, Soizic Le Guiner, Nadine Gervois, Elisabeth Diez, and Francine Jotereau
- 2840 CD28 Expression by Mouse Mast Cells Is Modulated by Lipopolysaccharide and Outer Surface Protein A Lipoprotein from *Borrelia burgdorferi*
Eric V. Marietta, Janis J. Weis, and John H. Weis
- 2849 Metacyclogenesis Modulates the Ability of *Leishmania* Promastigotes to Induce IL-12 Production in Human Mononuclear Cells
Alexandrina Sartori, Milton A. P. Oliveira, Phillip Scott, and Giorgio Trinchieri
- 2858 IL-10 Improves Lung Injury and Survival in *Pseudomonas aeruginosa* Pneumonia
Teiji Sawa, David B. Corry, Michael A. Gropper, Maria Ohara, Kiyoyasu Kurahashi, and Jeanine P. Wiener-Kronish

INFLAMMATION

- 2867 DBA/1 Mice Expressing the Human TNF- α Transgene Develop a Severe, Erosive Arthritis: Characterization of the Cytokine Cascade and Cellular Composition
Debra M. Butler, Anne-Marie Malfait, Lesley J. Mason, Paul J. Warden, George Kollias, Ravinder N. Maini, Marc Feldmann, and Fionula M. Brennan
- 2877 Oposonized Zymosan Stimulates the Redistribution of Protein Kinase C Isoforms in Human Neutrophils
Susan Sergeant and Linda C. McPhail
- 2886 IL-1 β Depresses Expression of the 70-Kilodalton Heat Shock Protein and Sensitizes Glomerular Cells to Oxidant-Initiated Apoptosis
Takashi Yokoo and Masanori Kitamura
- 2893 Neutrophil Transendothelial Migration Is Independent of Tight Junctions and Occurs Preferentially at Tricellular Corners
Alan R. Burns, David C. Walker, Evelyn S. Brown, Lisa T. Thurmon, Robert A. Bowden, Charles R. Keese, Scott I. Simon, Mark L. Entman, and C. Wayne Smith
- 2904 Human Mast Cells Produce the CD4⁺ T Lymphocyte Chemoattractant Factor, IL-16
Vanitcha Rumsaeng, William W. Cruikshank, Barbara Foster, Calman Prussin, Arnold S. Kirshenbaum, Thomas A. Davis, Hardy Kornfeld, David M. Center, and Dean D. Metcalfe
- 2911 Effect of Recombinant Human IL-4 on Tryptase, Chymase, and Fc ϵ Receptor Type I Expression in Recombinant Human Stem Cell Factor-Dependent Fetal Liver-Derived Human Mast Cells
Han-Zhang Xia, Zhongmin Du, Shirley Craig, Gregory Klisch, Nancy Noben-Trauth, Jarema P. Kochan, Thomas H. Huff, Anne-Marie A. Irani, and Lawrence B. Schwartz
- 2922 Functional Role for the Myeloid Differentiation Antigen CD14 in the Activation of Human Monocytes by IL-2
Maria Carla Bosco, Igor Espinoza-Delgado, Tammy K. Rowe, Maria Grazia Malabarba, Dan L. Longo, and Luigi Varesio
- 2932 Suppression of TNF- α Secretion by Azelastine in a Rat Mast (RBL-2H3) Cell Line: Evidence for Differential Regulation of TNF- α Release, Transcription, and Degranulation
Izumi Hide, Nobuko Toriu, Tomomi Nuibe, Atsuko Inoue, Michihiro Hide, Shoso Yamamoto, and Yoshihiro Nakata
- 2941 IL-15 Functions as a Potent Autocrine Regulator of Macrophage Proinflammatory Cytokine Production: Evidence for Differential Receptor Subunit Utilization Associated with Stimulation or Inhibition
David G. Alleva, Steven B. Kaser, M. Alexandra Monroy, Matthew J. Fenton, and David I. Beller
- 2952 Effects of 5-Oxo-6,8,11,14-Eicosatetraenoic Acid on Expression of CD11b, Actin Polymerization, and Adherence in Human Neutrophils
William S. Powell, Sylvie Gravel, Fawaz Halwani, Charles S. Hii, Zhi Hua Huang, Anne-Marie Tan, and Antonio Ferrante

CLINICAL IMMUNOLOGY

- 2962 Cutaneous Injection of RANTES Causes Eosinophil Recruitment: Comparison of Nonallergic and Allergic Human Subjects
Lisa A. Beck, Scott Dalke, Kristin M. Leiferman, Carol A. Bickel, Robert Hamilton, Hugh Rosen, Bruce S. Bochner, and Robert P. Schleimer
- 2973 Defective TCR-Mediated Signaling in Synovial T Cells in Rheumatoid Arthritis
Madelon M. Maurice, Arjan C. Lankester, Anja C. Bezemer, Minke F. Geertsma, Paul-Peter Tak, Ferdinand C. Breedveld, René A. W. van Lier, and Cornelis L. Verweij
- 2979 Induction of TNF- α in Human Peripheral Blood Mononuclear Cells by the Mannoprotein of *Cryptococcus neoformans* Involves Human Mannose Binding Protein
Wendy Chaka, André F. M. Verheul, Varsha V. Vaishnav, Robert Cherniak, Jelle Scharringa, Jan Verhoef, Harm Snippe, and Andy I. M. Hoepelman
- 2986 Increased Expression of Signaling Lymphocytic Activation Molecule in Patients with Rheumatoid Arthritis and Its Role in the Regulation of Cytokine Production in Rheumatoid Synovium
Pia Isomäki, Gregorio Aversa, Benjamin G. Cocks, Reijo Luukkainen, Riitta Saario, Paavo Toivanen, Jan E. de Vries, and Juha Punnonen
- 2994 Cerebrospinal Fluid Cytokines in Pediatric Neuropsychiatric Disease
Barbara B. Mittleman, F. Xavier Castellanos, Leslie K. Jacobsen, Judith L. Rapoport, Susan E. Swedo, and Gene M. Shearer
- 3000 HIV-1 gp120 Induces an Association Between CD4 and the Chemokine Receptor CXCR4
Sophie Ugolini, Maxime Moulard, Isabelle Mondor, Nicolas Barois, Denis Demandolx, James Hoxie, Anne Brelot, Marc Alizon, Jean Davoust, and Quentin J. Sattentau
- 3009 Regulation of Antigen-Specific IgE, IgG1, and Mast Cell Responses to Ingested Allergen by Mucosal Tolerance Induction
Astrid G. van Halteren, Maarten J. van der Cammen, Deborah Cooper, Huub F. Savelkoul, Georg Kraal, and Patrick G. Holt
- 3016 Tolerance to a Dominant T Cell Epitope in the Acetylcholine Receptor Molecule Induces Epitope Spread and Suppresses Murine Myasthenia Gravis
Bo Wu, Caishu Deng, Elzbieta Goluszko, and Premkumar Christadoss
- 3024 DNA-Binding Antibodies from Viable Mice: Implications for B Cell Tolerance
Connie M. Westhoff, Amy Whittier, Shannon Kathol, Jackie McHugh, Carlye Zajicek, Leonard D. Shultz, and Dwane E. Wylie
- 3034 Cytokine Patterns in Tuberculous and Sarcoid Granulomas: Correlations with Histopathologic Features of the Granulomatous Response
Anne Bergeron, Marcel Bonay, Marianne Kambouchner, Denise Lecossier, Marc Riquet, Paul Soler, Allan Hance, and Abdellatif Tazi
- 3044 IL-7 Overexpression in Transgenic Mouse Keratinocytes Causes a Lymphoproliferative Skin Disease Dominated by Intermediate TCR Cells: Evidence for a Hierarchy in IL-7 Responsiveness Among Cutaneous T Cells
Ifor R. Williams, Elizabeth A. Rawson, Lisa Manning, Themis Karaoli, Benjamin E. Rich, and Thomas S. Kupper

- 3057 Tumor-Induced Suppression of T Lymphocyte Proliferation Coincides with Inhibition of Jak3 Expression and IL-2 Receptor Signaling: Role of Soluble Products from Human Renal Cell Carcinomas
Vladimir Kolenko, Qiu Wang, M. C. Riedy, John O'Shea, Jerome Ritz, Martha K. Cathcart, Patricia Rayman, Raymond Tubbs, Mark Edinger, Andrew Novick, Ronald Bukowski, and James Finke
- 3068 Reduced Expression of *Tap1* and *Lmp2* Antigen-Processing Genes in the Nonobese Diabetic (NOD) Mouse Due to a Mutation in Their Shared Bidirectional Promoter
Gang Yan, Yineng Fu, and Denise L. Faustman
- 3081 Author Index