

Antibody targeting of human T cell CD27 identifies genes and pathways related to inflammation

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Monoclonal antibodies are increasingly being used as effective therapeutic tools to agonize or antagonize molecules involved in immune responses against cancer and autoimmunity. Celldex has recently characterized a fully human mAb to CD27 (CDX-1127), a TNFR superfamily member, currently undergoing evaluation in the clinic. Here we present the human in vitro characterization of T cell responses to an anti-CD27 agonistic mAb and show that it effectively provides co-stimulatory signals in a TCR-dependent manner. These events when further investigated in silico using global transcriptional profiling and network analysis revealed several up and down regulated genes that patterned as “early” and “late” events to uncover cytokines and pathways related to inflammation and representing potential biomarkers relevant for clinical application of our CD27 agonist mAb.

Biography

Venky Ramakrishna earned his PhD in Immunology at The Weizmann Institute of Science, Rehovot, Israel with Postdoctoral years in Italy's Mario Negri Pharmacological Research Inst. in Chieti and the National Cancer Institute, Milano. He also holds an engineering degree from India's prestigious Indian Institute of Technology in Kharagpur (WB) and lectin research at the Indian Institute of Science Bangalore. He formerly held R&D positions at Argonex Pharmaceuticals and Upstate Biotechnology (Charlottesville, VA) and Bristol Myers Squibb (formerly Medarex, Bloomsbury, NJ). He is currently Associate Director of R&D Immunology at Celldex Therapeutics (Hampton, NJ, USA) with several technology and research patents in US and Europe and well published in peer reviewed journals. His current interests include applying integrative biology and OMICS in translational medicine.

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