



TEST DESCRIPTION OVERVIEW

TEST NAME	DESCRIPTION	TEST CODE	CPT CODE(S)	ANTIGENS INVESTIGATED			
				<u>T-Subsets</u>	<u>B-Subsets</u>	<u>NK-Subsets</u>	<u>Other</u>
ABSOLUTE AT4	To monitor patient's individual CD4 and CD8 T cell populations. Panel is routinely used in determining therapeutic considerations for HIV+ patients.	AT4	88184 88185 x4 88187	CD3 CD4 CD8			CD14 CD45
AUTOIMMUNE LYMPHOPROLIFERATIVE SYNDROME	Evaluates the presence of TCR alpha/beta positive – CD4 and CD8 double negative T cells, referred to as TCRab-DNTCs.	AILYMP	86355 86357 88184 88185 x14 88189	CD3 CD4 CD8 TCRαβ B220	CD19 CD21 CD27 HLA-DR IgD	CD16 CD56	CD11b CD14 CD15 CD25 CD45
BRUTON'S TYROSINE KINASE	Evaluates the presence of Bruton's Tyrosine Kinase (BTK) expression in monocytes and B cells.	BTK	86355 86357 88184 88185 x8 88188	CD3 CD4 CD8	CD19 BTK	CD16 CD56	CD11b CD14 CD15 CD45
COMMON VARIABLE IMMUNODEFICIENCY	Evaluates lymphocyte subpopulations, T cell memory and activation status, and B cells naïve/memory/switched memory status based on IgD and CD27 expression.	CVID	86355 86357 88184 88185 x14 88189	CD3 CD4 CD8 CD45RA CD45RO	CD21 CD27 HLA-DR IgD	CD16 CD56	CD11b CD14 CD15 CD45 CD69
CYTOKINE-IBD (PBMC ISOLATION)	Determines the ability of IL-10 to inhibit LPS induced IL-6 cytokine production, a STAT3 dependent event. Useful to test IL10 receptor function and STAT3 function (HyperIgE)	CYTIBD	86353 x4 83520				
CYTOTOXICITY/APOPTOSIS (PBMC ISOLATION)	Evaluates NK cell cytotoxicity by measuring apoptosis of tumor cells. Abnormal in hemophagocytic lymphohistiocytosis.	CYTAPO	86352 88184 88185x2 88187	CD8		CD56 CD107a	
HYPER IGM	Evaluates the expression of CD40L on activated CD4 cells, and CD40 expression. Can be used to evaluate carrier status.	HIGM	86355 86357 88184 88185 x9 88188	CD3 CD4 CD8 CD154	CD19 CD40	CD16 CD56	CD11b CD14 CD15 CD45
MENDELIAN SUSCEPTIBILITY TO MYCOBACTERIAL DISEASES	Evaluates expression of INF gamma and IL12 receptors (CD119 and CD212), as well as responsiveness of cells to IFN gamma and IL12 by measuring phospho-STAT1 and phospho-STAT4, respectively.	MSMD	86353 86355 86357 88184 88185 x20 88189	CD3 CD4 CD8 CD45RA CD45RO	CD19 CD20 CD27 CD119 CD212	CD16 CD56	CD11b CD14 CD15 CD18 CD45 CD69 HLA-ABC HLA-DR TCRαβ pSTAT1 pSTAT4
NEUTROPHIL OXIDATIVE BURST	Evaluates the ability of neutrophils to generate an oxidative burst using dihydrorhodamine (DHR). Patients with chronic granulomatous disease (CGD) are defective in this response	NEUOXB	88184 88185 88187				CD16



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PERFORIN GRANZYME	Determines the presence of intracellular perforin, granzyme A, and granzyme B within cytotoxic lymphocytes and/ natural killer cells.	PERGRA	86355 86357 88184 88185 x10 88188	CD3 CD4 CD8	CD19	CD56 CD8	CD11b CD14 CD15 CD45 GranzymeA GranzymeB Perforin
PRIMARY IMMUNODEFICIENCY 1	Evaluates lymphocyte subpopulations(T, B, NK), as well are surface markers on PMNs.	PID1	86355 86357 88184 88185 x7 88188	CD3 CD4 CD8	CD19	CD16 CD56	CD11b CD14 CD15 CD45
PRIMARY IMMUNODEFICIENCY 2	Evaluates lymphocyte subpopulations(T, B, NK), as well are surface markers on PMNS. Also evaluates memory status of CD4 lymphocytes, activation status of CD4 and CD8 cells, and surface markers on neutrophils (CD15/CD18 for LAD1/LADII).	PID2	86355 86357 88184 88185 x16 88189	CD3 CD4 CD8 CD45RA CD45RO	CD19 CD20 CD27	CD16 CD56	CD11b CD14 CD15 CD18 CD45 CD69 HLA-ABC HLA-DR TCRαβ
T CELL ACTIVATION (PBMC ISOLATION)	Evaluates T cell activation by demonstrating upregulation of CD25 and CD69 expression.	TCACT	86355 86357 88184 88185 x10 88187	CD3 CD4 CD8	CD19	CD16 CD56	CD45 CD11b CD14 CD15 CD18 CD25 CD69
T CELL INTERLEUKIN PROLIFERATION (PBMC ISOLATION)	Evaluates the proliferative capacity of T cells in response to CD3 activation and IL2, IL7, or IL15.	TINTL	86353 88187	CD4 CD8			
T CELL MITOGEN PROLIFERATION (PBMC ISOLATION)	Evaluates the proliferative capacity of lymphocytes to PHA, ConA, and CD3 with or without IL2.	TMITO	86353 88187	CD4 CD8			
T HELPER IL17 (PBMC ISOLATION)	Evaluates IL-17 production in CD4+ T helper cells. Deficient expression is associated with hyper IgE syndrome (HIES)/Job's Syndrome NOTE: <u>NOT</u> to be collected on patients < 1 year of age	THIL17	86355 86357 88184 88185 x9 88188	CD3 CD4 CD8	CD19	CD16 CD56	CD11b CD14 CD15 CD45 IFN-γ IL-17
TOLL-LIKE RECEPTOR/XIAP	Evaluates ability of monocytes to respond to LPS and MDP. Defective responsive can be seen in IRAK4/MyD88 and XIAP deficiency, respectively.	TLREC/ XIAP	83520 86352 88184 88187				CD14 TNFα



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T REGULATORY –FOXP3 (PBMC ISOLATION)	Evaluates lymphocyte subpopulations and the presence of Foxp3+ T regulatory cells.	TREG	86355 86357 88184 88185 x10 88188	CD3 CD4 CD8 CD25 CD127 FoxP3	CD19	CD16 CD56	CD11b CD14 CD15 CD45
X-LINKED LYPHOPROLIFERATIVE SYNDROME (PBMC ISOLATION)	Determines the presence of SAP and XIAP expression in lymphocytes to evaluate for XLP type 1 and type 2, respectively.	XLP	86355 86357 88184 88185 x18 88189	CD3 CD4 CD8 CD45RA CD45RO	CD19 CD20 CD27	CD16 CD56	CD11b CD14 CD15 CD18 CD45 CD69 HLA-ABC HLA-DR TCRαβ SAP XIAP