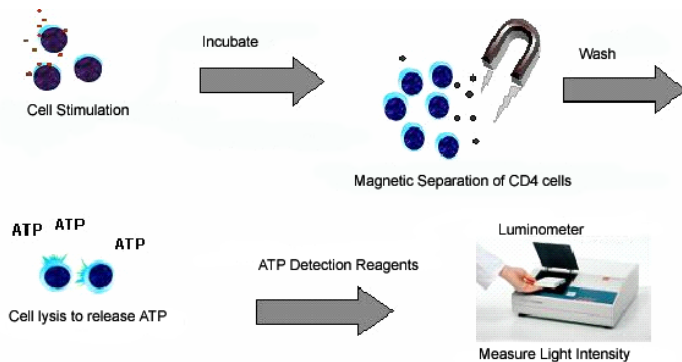


Lymphocyte Activation (ImmuKnow™)

Test Names: Lymphocyte Activation (ImmuKnow™)
Other Names: Immune Cell Function Test
 Phytohemagglutinin (PHA) Test
Test Code: 401760
CPT Code: 86352

Background: T-Lymphocytes are responsible for cell-mediated immunity and are essential for the development and regulation of antibody responses. The methods commonly used to measure the activation and proliferation of lymphocytes have been very useful in research but are not practical for routine clinical use because the tests generally require large quantities of blood, are technically demanding, require radioactive isotopes and the incubation time is usually 5 to 7 days. This test method has become a new tool to manage immunosuppressive drug therapy in transplant patients.

Method: The method developed by Cylex Inc. enables the investigator to measure the early events in the activation of specific cell subsets (e.g. CD4). Blood cells are stimulated with mitogen, the CD4 cells are then separated with a monoclonal antibody-coated paramagnetic particle and the ATP produced during activation is quantified with a luminometer. This PHA test has been cleared by FDA for in vitro diagnostics use. The test is available in New York for transplant recipients only.



Reporting of Results: The lab reports the unstimulated result and the mitogen stimulated result in units of ng ATP/mL.

Applications of Technology: The method has the potential for a variety of important research and clinical applications, including:

- To assess CMI in patients with suspected immune defects and transplant patients undergoing immunosuppressive therapy
- To measure CMI in HIV patients
- To assess immunotoxicity in clinical trials

Specimen Requirements: Collect 2 mL whole blood in sodium heparin vacutainer. (Do not use lithium heparin, ACD tubes or EDTA anticoagulants). Due to the time constraints of the ImmuKnow™ Cell Function assay, samples need to be collected between the hours of **8am – 5pm C.S.T.** and shipped **priority overnight** at **ambient** temperature. **It is critical that temperature extremes be avoided and test must be performed within 30 hours of collection.** Please call in advance when this test is being ordered. For local clients only: Samples must arrive by 3:00pm.

Set Up Schedule: Monday - Friday. Do not ship on days that a holiday will follow a set up day.

Other Tests to Assess T Cell Function: IBT now offers two flow cytometry-based tests that measure T Cell activation by CD69 upregulation and IFN γ production.

403066 T Cell Fx™- Complete
 Includes: PHA, Viral Mix (VZV, CMV, Mumps), Viral Peptide Mix (CMV, EBV, Flu), Tetanus toxoid, Candida albicans, Staphylococcus enterotoxin B (SEB), and Pokeweed Mitogen (PWM)

403065 T Cell Fx™- Select
 Includes: PHA and Viral Mix (VZV, CMV, Mumps)

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