

NEW Products For Non-human Primate Research

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To continue to provide the most complete line of reagents for Non-human Primate (NHP) research, BD Biosciences Pharmingen has developed new methodologies and improved on established protocols to detect cytokine responses in this animal model.

New NHP Reagents for Cytokine Flow Cytometry

We are proud to announce the availability of more anti-bodies that cross-react with NHP cytokines. These anti-bodies have been studied under various conditions in order to optimize our current protocols. Phorbol myristate acetate (PMA) and Ionomycin, or Lipopolysaccharide (LPS), are routinely used on NHP peripheral blood mononuclear cells (PBMC) to induce production of IFN- γ , IL-2, IL-4, IL-6, TNF- α as well as other cytokines. Superantigen staphylococcal enterotoxin B (SEB) can also be used to induce cytokine production and this resulted in a better IL-4 response than that induced by PMA and Ionomycin.

Briefly, NHP PBMC are stimulated with either PMA/Ionomycin or SEB in presence of Brefeldin A

or Monensin as protein transport inhibitors. Following incubation, the cells are fixed and permeabilized, then stained with the appropriate anti-cytokine antibodies. Anti-CD69 is also added to stain activated cells. After incubation with the antibodies, the cells are washed, resuspended and analyzed in a FACS Calibur.

The strategy for analysis offers options to compare cytokine production by activated (CD69⁺) or non-activated cells. The methodology works with either whole blood or PBMC. Using whole blood, Brefeldin A provides more optimal stimulation compared to Monensin, which may interfere with proper lysis of the sample.

New NHP Reagents for ELISA

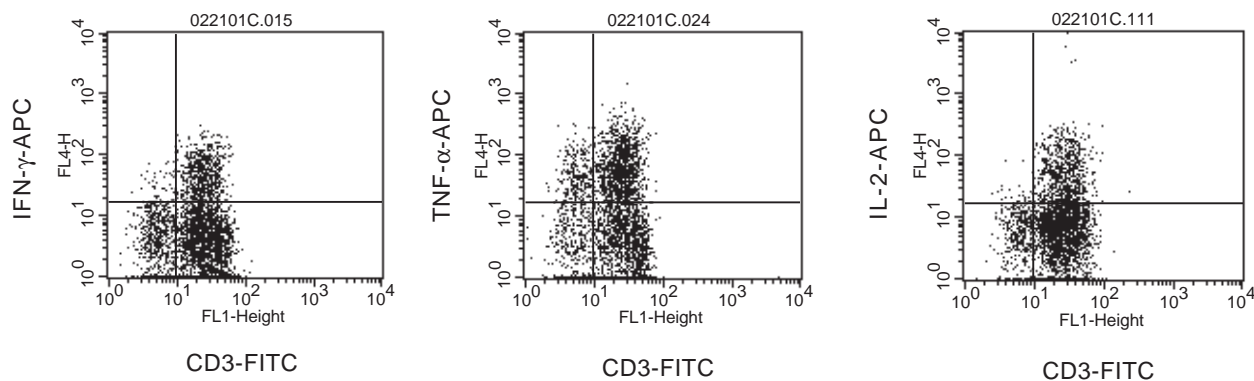
For a list of additional chemokine/cytokine antibodies that cross-react with monkey please see the article entitled BD OptEIA™ Monkey ELISA Sets for Rhesus, Cynomolgus, and Baboon Cytokine/Chemokine measurement, page 24 of this issue of Hotlines.

New NHP Reagents for Multi-color Analysis

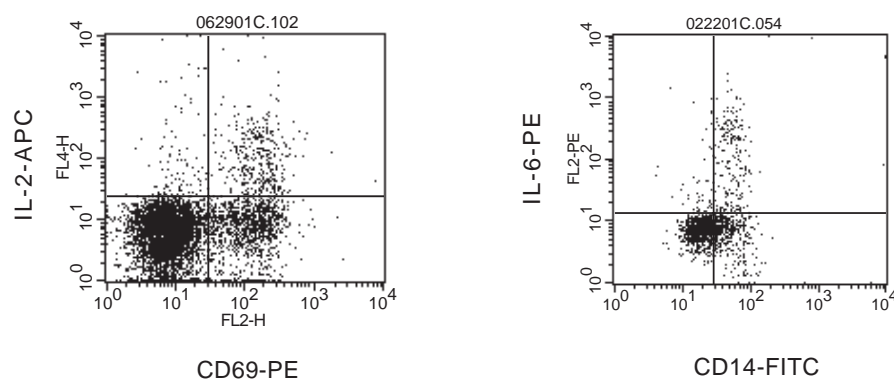
We have also developed new antibody combinations to simplify immunophenotyping of NHP leukocytes. These are three-color combinations that include CD45 or CD3 markers as gating tools. Below is a list of available multi-color reagents.

NHP Cytokine Flow Cytometry Reagents

New Cat. No.	Cat No.	Antibody	Clone	Format
557064	71205L	anti-IL-16	14.1	PE
557065	71215L	anti-IL-8	G265-8	PE
557066	71225L	anti-MCP-1	5D3-F7	PE
551532	71229L	anti-MCP-1	5D3-F7	APC
559361	71234L	anti-IL-2	MQ1-17H12	FITC
557067	71235L	anti-IL-2	MQ1-17H12	PE
551383	71239L	anti-IL-2	MQ1-17H12	APC
557068	71245L	anti-TNF- α	MAb11	PE
551384	71249L	anti-TNF- α	MAb11	APC
557069	71255L	anti-MIP1- α	11A3	PE
551533	71259L	anti-MIP1- α	11A3	APC
557070	71265L	anti-RANTES	2D5	PE
557074	71275L	anti-IFN- γ	4S.B3	PE
551385	71279L	anti-IFN- γ	4S.B3	APC
551473	71895L	anti-IL-6	MQ2-6A3	PE
551474	71899L	anti-IL-6	MQ2-6A3	APC
551774	71985L	anti-IL-4	8D4-8	PE



Profile of PMA/Ionomycin-stimulated PBMC of cynomolgus macaque



Profile of SEB-stimulated
PBMC of rhesus macaque

Profile of LPS-stimulated peripheral
blood monocytes of rhesus macaque

Current Multi-color Reagents

New Cat. No.	Cat. No.	Description	Size
551070	7179CL	CD3-FITC/CD4-PE/CD45-PerCP	50 Tests
551069	7180CL	CD3-FITC/CD8-PE/CD45-PerCP	50 Tests
551068	7181CL	CD3-FITC/CD20-PE/CD45-PerCP	50 Tests
551067	7182CL	CD3-FITC/CD16-PE/CD45-PerCP	50 Tests

The data associated with these studies will be presented at the upcoming 19th Annual Symposium on Non-human Primate Models for AIDS, San Juan, Puerto Rico, November 7 - 10, 2001.

BD Biosciences Pharmingen appreciates the input and contribution of our valued customers as we continue to expand the Non-Human Primate reagent offering.