



# Maxim Biotech, Inc.

Cat. No.: **SP-10106 (CD4-1003/CD4-1004)**  
**Mouse CD4, Primer set kit**

## Kit Components:

Pre-mixed Primers	1000 µl
Optimized PCR Buffer (Chemicals, enhancer, stabilizer, dNTPs)	750 µl x 4 tubes
Positive Control	100 µl
M.W. marker, 100 bp ladder	100 µl
DDH <sub>2</sub> O	1000 µl

## Primer Tm:

5' Oligo:	<b>68°C</b>
3' Oligo:	<b>71°C</b>

## Storage and Stability:

Recommend storage at -20 °C, stable for one year.

## Amplification Template:

DNA: **N/A** cDNA: **Yes**

**Use:** The products are able to amplify target sequences of **Mouse, CD4**. The amount of the products supplied is enough for 50 µl, 100 assays in *in vitro* PCR\* amplification process.

## PCR Protocols

### A. Master Mixture Preparation

Add 250 µl each of Pre-mixed Primers to each tube of Optimized PCR Buffer. This Master Mixture should be aliquot and stored at -20°C.

### Reagent

#### Master Mixture

	<u>Per PCR assay</u>
Taq DNA polymerase	40.0 µl
Specimen or control cDNA	0.2 µl
Make up final volume to 50 µl with distilled water if specimen or control cDNA used is less than 10.0 µl.	10.0 µl

Since the Taq DNA polymerase needed for each reaction is a very small volume, it is recommended that the above Master Mixture and Taq DNA polymerase components be premixed in sufficient quantity for daily needs. This Master Mixture mixed with Taq DNA polymerase is labeled as **Ready-to-use Master Mixture**. The Ready-to-Use Master Mixture should be dispensed into an individual

reaction vial before adding the specimen or control DNA. This Ready-to-Use Master Mixture can be prepared daily and stored at 4°C.

### B. PCR reaction profiles

Reaction profiles will need to be optimized according to the machine type and needs of user. However, a time-temperature profile for the PCR reaction optimized for Perkin Elmer machine type 2400 or 9600 is provided as follows:

96 °C	1 min.	1X
94 °C	1 min.	30-35X*
58 °C	1 min.	
72 °C	1 min.	
72 °C	10 min.	1X
4-25 °C	HOLD	

**Analysis of Amplified Samples:** One-tenth of the amplified samples are subjected to electrophoresis in an agarose gel containing 0.5 µg/ml ethidium bromide. A band of **266** base pairs in size indicates a positive result or the presence of target sequences in the specimens. Slot or Southern blot hybridization (Cat No. IH-60001 or IH-60002) using our biotinylated oligo-probe or regular oligo-probe can be applied for further verification and quantitation of the amplified DNA sequences.

**Sequences:** (Alignment on database: **X04836**)

**Other related products:** Please use the Maxim web page (<http://www.maximbio.com/genesearch.htm>) to search for genomics and proteomics products related to genes available from Maxim.

PCR\*: The Polymerase Chain Reaction (PCR) process is covered by patents owned by Hoffmann-La Roche. Use of the PCR process requires a license. This product does not convey a license to use the PCR process.

30-35X\*: Use higher number of cycles for low copy genes and lower number of cycles for high copy genes. For some very low copy number of genes, 40-45 cycles may be used and for some very high copy genes, 20-25 cycles may be used instead.