

Store at +4C  
#8669**SignalKine™ Human IL-4 Sandwich ELISA Kit****Orders:** 877-616-CELL (2355)  
orders@cellsignal.com**Support:** 877-678-TECH (8324)**Web:** info@cellsignal.com  
cellsignal.com

1 Kit ((96 assays) Low Volume Microplate)

**Species Cross Reactivity:** H  
**UniProt ID:** #P05112  
**Entrez-Gene Id:** #3565

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Quantity	Color	Storage Temp
ELISA Wash Buffer (20X)	9801	25 ml	Colorless	+4C
TMB Substrate	7004	6 ml	Colorless	+4C
STOP Solution	7002	6 ml	Colorless	+4C
Sealing Tape	54503	2 ea		+4C

Kit contents scale proportionally with size, except sealing tape.

Example: The V1 kit contains 5X the listed quantities above, but will exclude the sealing tape.

The microwell plate is supplied as 12 8-well modules - Each module is designed to break apart for 8 tests.

**Description**

SignalKine™ Human IL-4 Sandwich ELISA Kit from Cell Signaling Technology (CST) is a solid phase sandwich enzyme-linked immunosorbent assay (ELISA) that detects human IL-4 (hIL-4) in multiple matrices. Unknown samples being tested for hIL-4 and hIL-4 standards are added to low volume microwells, where the hIL4 is captured by the coated hIL-4 Rabbit mAb. Following a washing step, a biotinylated hIL-4 Detection Rabbit mAb is added to detect the captured hIL-4. HRP-linked Streptavidin is then used for detection of the biotinylated hIL-4 Detection Rabbit mAb. HRP substrate, TMB, is added for color development. The magnitude of absorbance for this developed color is proportional to the quantity of hIL-4 in the sample.

SignalKine™ Human IL-4 Sandwich ELISA Kit detects hIL-4 in multiple matrices that can be quantified by generating a standard curve with the recombinant hIL-4 protein standard provided. The hIL-4 standard range is from 15.6 to 1000 pg/ ml. Samples containing higher levels of hIL-4 can be diluted to fit into the standards range.

**Background**

Interleukin-4 (IL-4) is a cytokine secreted by activated T cells, basophils, and mast cells (1,2). While it contributes to many immunomodulatory responses, it is mainly recognized as the cytokine responsible for eliciting differentiation of naive T cells into Th2 lineage cells that are defined by their secretion of IL-4, IL-5, and IL-10 (3). In addition, IL-4 contributes to immunoglobulin class switching by inducing the production of IgE from B cells (4,5). IL-4 acts through the IL-4 receptor, leading to tyrosine phosphorylation and activation of the Stat6 transcription factor (6).

**Background References**

1. Yokota, T. et al. (1986) *Proc Natl Acad Sci USA* 83, 5894-8.
2. Grabstein, K. et al. (1986) *J Exp Med* 163, 1405-14.
3. Kopf, M. et al. (1993) *Nature* 362, 245-8.
4. Kotowicz, K. and Callard, R.E. (1993) *Eur J Immunol* 23, 2250-6.
5. Thyphronitis, G. et al. (1989) *Proc Natl Acad Sci USA* 86, 5580-4.
6. Hou, J. et al. (1994) *Science* 265, 1701-6.

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Revision 1

**#8669**

**SignalKine™ Human IL-4 Sandwich  
ELISA Kit**

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