

Store at +4C
#8629**SignalKine™ Human IL-2
Chemiluminescent Sandwich ELISA Kit****Orders:** 877-616-CELL (2355)
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1 Kit ((96 assays) Low Volume Microplate)

Species Cross Reactivity: H
UniProt ID: #P60568
Entrez-Gene Id: #3558

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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
Luminol/Enhancer Solution	84850	3 ml	Colorless	RT
Stable Peroxide Buffer	42552	3 ml	Colorless	RT
Sealing Tape	54503	2 ea		+4C

Description

SignalKine™ Human IL-2 Chemiluminescent Sandwich ELISA Kit from Cell Signaling Technology (CST) is a solid phase sandwich enzyme-linked immunosorbent assay (ELISA) that detects human IL-2 (hIL-2) in multiple matrices. Unknown samples being tested for hIL-2 and hIL-2 standards are added to low volume microwells, where the hIL-2 is captured by the coated hIL-2 Mouse mAb. Following a washing step, a biotinylated hIL-2 Detection Rabbit mAb is added to detect the captured hIL-2. HRP-linked Streptavidin is then used for detection of the biotinylated hIL-2 Detection Rabbit mAb. A chemiluminescent reagent is added for signal development. The magnitude of light emission, measured in relative light units (RLU) is proportional to the quantity of human hIL-2 in the sample. SignalKine™ Human IL-2 Chemiluminescent Sandwich ELISA Kit detects hIL-2 in multiple matrices that can be quantified by generating a standard curve with the recombinant hIL-2 protein standard provided. The hIL-2 standard range is from 31.2 to 2000 pg/ml. Samples containing higher levels of hIL-2 can be diluted to fit into the standards range.

Background

Interleukin-2 (IL-2) is a T cell stimulatory cytokine best known for inducing T cell proliferation and NK cell proliferation and activation (1,2). IL-2 also promotes peripheral development of regulatory T cells (Tregs) (3,4). Conversely, IL-2 is involved in the activation-induced cell death (AICD) that is observed post T cell expansion by increasing levels of Fas on CD4⁺ T cells (5). The effects of IL-2 are mediated through a trimeric receptor complex consisting of IL-2R α , IL-2R β , and the common gamma chain, γ c (1,2). IL-2R α binds exclusively to IL-2 with low affinity and increases the binding affinity of the whole receptor complex including IL-2R β and γ c subunits. IL-15 also binds to IL-2R β (1,2). γ c is used by other cytokines, including IL-4, IL-7, IL-9, IL-15, and IL-21 (1,2). Binding of IL-2 initiates signaling cascades involving Jak1, Jak3, Stat5, and the PI3K/Akt pathways (1,2).

Background References

1. Ma, A. et al. (2006) *Annu Rev Immunol* 24, 657-79.
2. Gaffen, S.L. and Liu, K.D. (2004) *Cytokine* 28, 109-23.
3. Fehérvári, Z. et al. (2006) *Trends Immunol* 27, 109-11.
4. Antony, P.A. et al. (2006) *J Immunol* 176, 5255-66.
5. Jaleco, S. et al. (2003) *J Immunol* 171, 61-8.

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Revision 1

#8629

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