

Mouse IL-1a ELISA Kit ab199076

リコンビナント SimpleStep ELISA

5 References 画像数 7

製品の概要

製品名	Mouse IL-1a ELISA Kit				
検出方法	Colorimetric				
再現性	Intra-Assay (同時再現性)				
	サンプル	N	平均値	SD	CV%
	Overall	8			2.31%
	Inter-Assay (日差再現性)				
	サンプル	N	平均値	SD	CV%
	Overall	3			4.78%
サンプルの種類	Cell culture supernatant, Serum, Cit plasma				
アッセイタイプ	Sandwich (quantitative)				
検出感度	0.62 pg/ml				
検出範囲	4.69 pg/ml - 300 pg/ml				
添加回収試験	特定サンプルでの回収試験				
	サンプルの種類		平均 %	測定範囲	
	Cell culture supernatant		88.8	87.4% - 90.3%	
	Serum		101.2	98.5% - 103.5%	
	Cell culture media		94.4	93.4% - 96.1%	
	Cit plasma		97.6	94.1% - 101.6%	
全工程の試験時間	1h 30m				
ステップ	One step assay				
種交差性	交差種: Mouse				

製品の概要

Mouse IL-1a ELISA Kit (ab199076) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IL-1a protein in cell culture supernatant, cit plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse IL-1a with 0.62 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

特記事項

Interleukin 1 (IL-1) refers to two proteins encoded by two different genes (IL-1a and IL-1b), both of which share the same cell surface receptors. Mouse IL-1a is a pro-inflammatory cytokine that encodes a 270 aa residue called pro-IL-1a, which contains a nuclear localization sequence, an N-myristoylation site, and three potential N-linked glycosylation sites. Primarily, pro-IL-1a is localized to the cytosol after synthesis. However, some pro-IL-1a is secreted and is subsequently cleaved by extracellular proteases such as calpain to form the 17 kDa, 154 aa residue mature IL-1a. Importantly, both pro-IL-1a and mature IL-1a have been shown to bind the IL-1 receptor and are biologically active. This is different than pro-IL-1b and mature IL-1b, where pro-IL-1b is biologically inactive. Within the mature protein, rat IL-1a and human IL-1a share 79% and 56% aa sequence identity, respectively, with the mouse IL-1a protein.

IL-1a and IL-1b interact with three type I transmembrane Ig superfamily proteins: IL-1 receptor type I (IL-1 RI), IL-1 RII, and IL-1 receptor accessory protein (IL-1 RAcP). Both IL-1 RI and IL-1 RII can bind directly to IL-1a and IL-1b. IL-1 RAcP interacts with IL-1 RI in the presence of IL-1 to form a high-affinity receptor complex that is required for intracellular signal transduction. Interestingly, IL-1 RAcP will also bind IL-1 RII, but this creates a non-functional high-affinity receptor complex that does not transduce IL-1 signals. Thus, IL-1 RII can act to moderate the function of IL-1a and IL-1b.

IL-1a is typically expressed under normal conditions in skin keratinocytes and some epithelial cells, as well as in some cells in the central nervous system. Under pathological conditions, IL-1a is also strongly expressed by monocytes, tissue macrophages, dendritic cells, B lymphocytes and NK cells. Intracellular pro-IL-1a can also be localized to the nucleus where it plays a role as an intracellular regulator of human endothelial cell proliferation and migration. IL-1 possesses a wide variety of biological activities and plays a central role in mediating immune and inflammatory responses. Normal production of IL-1 is critical for hematopoiesis, osteoclast differentiation, and initiation of normal host responses to stresses such as injury and infection. Incorrect production of IL-1 has been shown to be associated with a variety of pathological conditions including sepsis, rheumatoid arthritis, inflammatory bowel disease, acute and chronic myelogenous leukemia, insulin-dependent diabetes mellitus, and atherosclerosis.

試験プラットフォーム

Microplate (12 x 8 well strips)

製品の特性

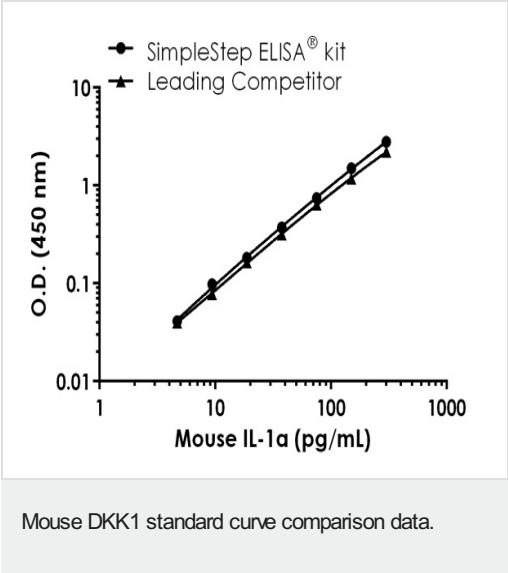
保存方法Store at +4°C. Please refer to protocols.

内容	1 x 96 tests
10X Mouse IL-1a (Interleukin-1 alpha) Capture Antibody	1 x 600µl
10X Mouse IL-1a (Interleukin-1 alpha) Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Mouse IL-1a (Interleukin-1 alpha) Lyophilized Recombinant Protein (ab119727)	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

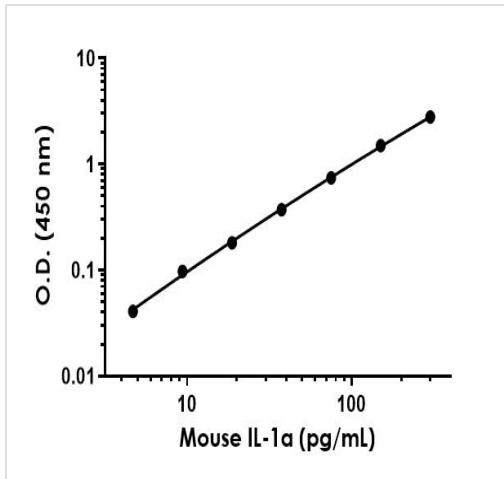
関連性IL-1 alpha is a member of the interleukin 1 cytokine family. It is a pleiotropic cytokine involved in various immune responses, inflammatory processes, and hematopoiesis. IL-1 alpha is produced by monocytes and macrophages as a proprotein, which is proteolytically processed and released in response to cell injury, and thus induces apoptosis. This gene and eight other interleukin 1 family genes form a cytokine gene cluster on chromosome 2. It has been suggested that the polymorphism of these genes is associated with rheumatoid arthritis and Alzheimer's disease.

細胞内局在Secreted

画像

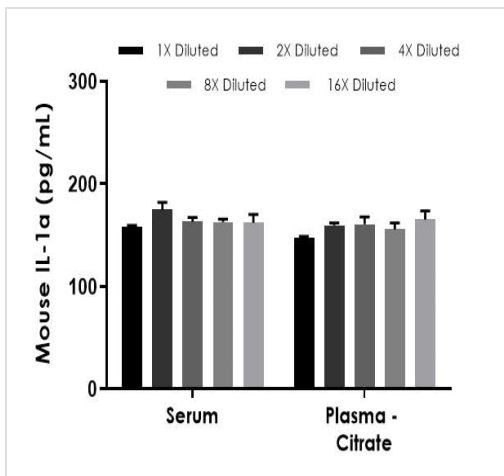


Standard curve comparison between mouse IL-1a SimpleStep ELISA[®] kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows comparable sensitivity.



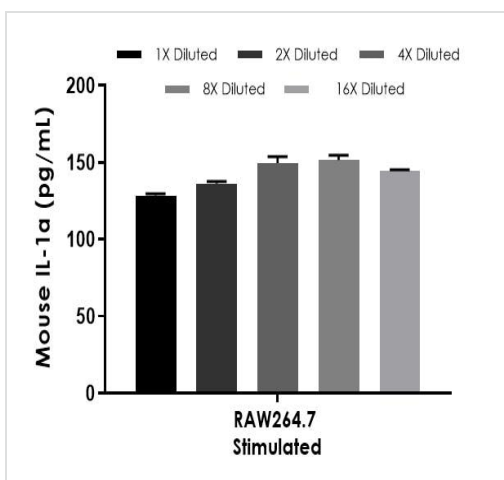
Example of IL-1α mouse standard curve in Sample Diluent NS.

Background-subtracted data values (mean \pm SD) are graphed.



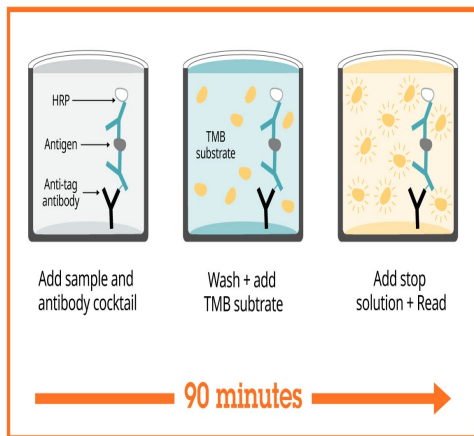
Linearity of dilution on biological matrixes.

Recombinant IL-1α mouse was spiked into 50% mouse serum and 50% mouse plasma and diluted in a 2-fold dilution series in Sample Diluent NS. The concentrations of mouse IL-1α were measured in duplicate and interpolated from the mouse IL-1α standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are graphed (mean \pm SD).



Specificity of IL-1α on stimulated and unstimulated cell culture supernatants.

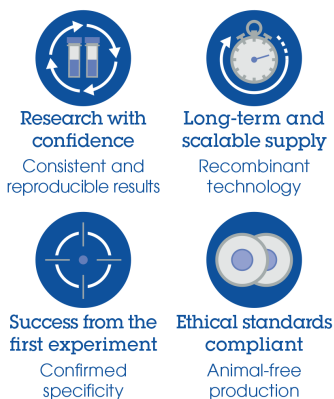
RAW264.7 cells were cultured in high glucose DMEM with 10% fetal calf serum or horse serum, 2 mM L-glutamine and 100 μ g/mL Kanamycin. RAW264.7 cells were starved for 24 hours and treated in the presence and absence of 5 μ g/mL of LPS. The concentrations of IL-1α were interpolated from the calibration curve and corrected for sample dilution (1:2). The mean IL-1α concentration in RAW264.7 media was determined to be 288 pg/mL in stimulated RAW 264.7 cells and undetectable in unstimulated RAW264.7 cells.



Sandwich ELISA - Mouse IL-1a ELISA Kit
(ab199076)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Powered by recombinant antibodies



Sandwich ELISA - Mouse IL-1a ELISA Kit
(ab199076)

To learn more about the advantages of recombinant antibodies see [here](#).

Get more done with SimpleStep ELISA



Sandwich ELISA - Mouse IL-1a ELISA Kit
(ab199076)

To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.co.jp/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors