Datasheet for ABIN2859313

# GZMA ELISA Kit

## 1 Image

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## Overview

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| Quantity: | 96 tests |
| Target: | GZMA |
| Binding Specificity: | AA 29-262 |
| Reactivity: | Human |
| Method Type: | Sandwich ELISA |
| Detection Range: | 15.6-1000 pg/mL |
| Minimum Detection Limit: | 15.6 pg/mL |
| Application: | ELISA |

## Product Details

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| Purpose: | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Granzyme A |
| Brand: | PicoKine™ |
| Sample Type: | Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA) |
| Analytical Method: | Quantitative |
| Detection Method: | Colorimetric |
| Immunogen: | Expression system for standard: NSO<br>Immunogen sequence: I29-V262 |
| Specificity: | NSO, I29-V262 |
| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins. |
| Sensitivity: | <10pg/mL |

## Product Details

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| Material not included: | Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl |

## Target Details

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| Target: | GZMA |
| Alternative Name: | GZMA (GZMA Products) |
| Background: | Protein Function: Abundant protease in the cytosolic granules of cytotoxic T-cells and NK-cells which activates caspase-independent cell death with morphological features of apoptosis when delivered into the target cell through the immunological synapse. It cleaves after Lys or Arg. Cleaves APEX1 after 'Lys-31' and destroys its oxidative repair activity. Cleaves the nucleosome assembly protein SET after 'Lys-189', which disrupts its nucleosome assembly activity and allows the SET complex to translocate into the nucleus to nick and degrade the DNA. .<br>Background: Granzyme A is a protein that in humans is encoded by the GZMA gene. Cytolytic T lymphocytes (CTL) and natural killer (NK) cells share the remarkable ability to recognize, bind, and lyse specific target cells. They are thought to protect their host by lysing cells bearing on their surface "nonself" antigens, usually peptides or proteins resulting from infection by intracellular pathogens. The protein described here is a T cell- and natural killer cell-specific serine protease that may function as a common component necessary for lysis of target cells by cytotoxic T lymphocytes and natural killer cells. GZMA induces caspase-independent apoptosis in a characteristic manner, except it causes a distinctive form of DNA damage: single-stranded DNA nicking. A target of GZMA is the SET complex, including HMGB2 and ANP32A.<br>Synonyms: Granzyme A,3.4.21.78,CTL tryptase,Cytotoxic T-lymphocyte proteinase 1,Fragmentin-1,Granzyme-1,Hanukkah factor,H factor,HF,GZMA,CTLA3, HFSP,<br>Full Gene Name: Granzyme A<br>Cellular Localisation: Isoform alpha: Secreted. Cytoplasmic granule. |
| Gene ID: | 3001 |
| UniProt: | P12544 |
| Pathways: | Apoptosis |

## Application Details

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| Application Notes: | Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing. |
| Plate: | Pre-coated |
| Protocol: | human Granzyme A ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Granzyme A has been precoated onto 96-well plates. Standards(NSO, I29-V262) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Granzyme A is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Granzyme A amount of sample captured in plate. |
| Assay Procedure: | Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human Granzyme A standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Granzyme A standard solution and each sample be measured in duplicate. |
| Assay Precision: | • Sample 1: n=16, Mean(pg/ml): 89.5, Standard deviation: 4.65, CV(%): 5.2<br>• Sample 2: n=16, Mean(pg/ml): 376, Standard deviation: 16.17, CV(%): 4.3<br>• Sample 3: n=16, Mean(pg/ml): 525, Standard deviation: 23.10, CV(%): 4.4,<br>• Sample 1: n=24, Mean(pg/ml): 97.6, Standard deviation: 7.32, CV(%): 7.5<br>• Sample 2: n=24, Mean(pg/ml): 368, Standard deviation: 25.39, CV(%): 6.9<br>• Sample 3: n=24, Mean(pg/ml): 567, Standard deviation: 44.23, CV(%): 7.8 |
| Restrictions: | For Research Use only |

## Handling

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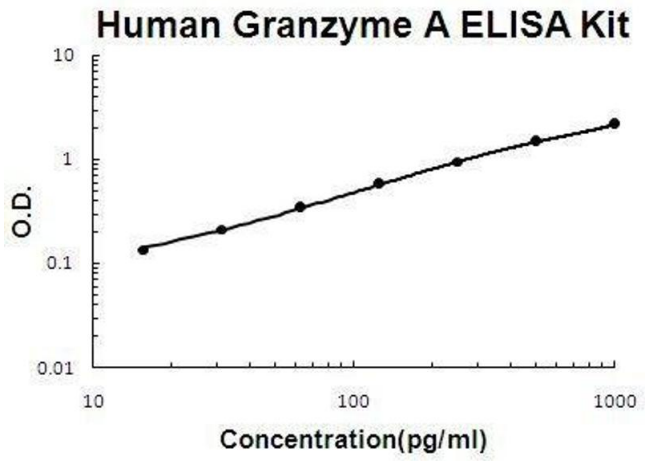
| Handling Advice: | Avoid multiple freeze-thaw cycles. |
| Storage: | -20 °C,4 °C |
| Storage Comment: | Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles |
| Expiry Date: | 12 months |




## ELISA

**Image 1.** Human Granzyme A PicoKine ELISA Kit standard curve