Datasheet for ABIN3044699

Caspase 3 ELISA Kit

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Overview

Quantity:	96 tests
Target:	Caspase 3 (CASP3)
Binding Specificity:	AA 29-175, AA 183-277
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	31.2-2000 pg/mL
Minimum Detection Limit:	31.2 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Caspase 3
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Immunogen sequence: S29-D175&A183-H277
Specificity:	Expression system for standard: E.coli Immunogen sequence: S29-D175&A183-H277
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<10pg/mL

Product Details

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

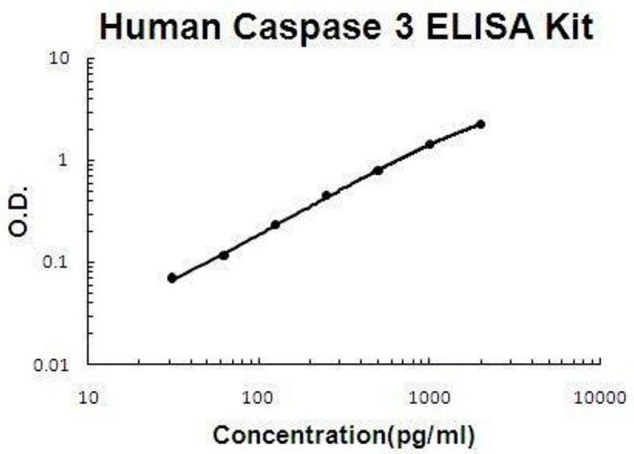
Target:	Caspase 3 (CASP3)
Alternative Name:	CASP3 (CASP3 Products)
Background:	Protein Function: Involved in the activation cascade of caspases responsible for apoptosis execution. At the onset of apoptosis it proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216-Asp-|-Gly-217' bond. Cleaves and activates sterol regulatory element binding proteins (SREBPs) between the basic helix-loop- helix leucine zipper domain and the membrane attachment domain. Cleaves and activates caspase-6, -7 and -9. Involved in the cleavage of huntingtin. Triggers cell adhesion in sympathetic neurons through RET cleavage. . Background: Caspase-3 is a caspase protein that is encoded by the CASP3 gene. This gene encodes a protein which is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. This protein cleaves and activates caspases 6, 7 and 9, and the protein itself is processed by caspases 8, 9 and 10. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. Alternative splicing of this gene results in two transcript variants that encode the same protein. Synonyms: Caspase-3,CASP-3,3.4.22.56,Apopain,Cysteine protease CPP32,CPP-32,Protein Yama,SREBP cleavage activity 1,SCA-1,Caspase-3 subunit p17,Caspase-3 subunit p12,CASP3,CPP32, Full Gene Name: Caspase-3 Cellular Localisation: Cytoplasm.
Gene ID:	836
UniProt:	P42574
Pathways:	Apoptosis, Caspase Cascade in Apoptosis, Sensory Perception of Sound, ER-Nucleus Signaling, Positive Regulation of Endopeptidase Activity, Activated T Cell Proliferation

Application Details

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.
Comment:	Tissue Specificity: Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.
Plate:	Pre-coated
Protocol:	human Caspase 3 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Caspase 3 has been precoated onto 96-well plates. Standards(Expression system for standard: E. coli, Immunogen sequence: S29-D175 & A183-H277) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Caspase 3 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 Caspase 3 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 2000pg/mL,1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL human Caspase 3 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, tissue homogenates or serum to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Caspase 3 standard solution and each sample be measured in duplicate.
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	4 °C,-20 °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 Caspase 3 PicoKine ELISA Kit standard curve

