Cyclin-Dependent Kinase 5 Activator 1 (CDK5R1) ELISA Kit for Human

PRODUCT OVERVIEW

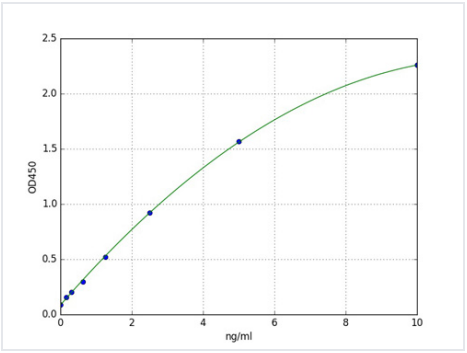
Product Name	Cyclin-dependent kinase 5 activator 1 (CDK5R1), ELISA Kit
Full Product Name	Human Cyclin-dependent kinase 5 activator 1 ELISA Kit
Product Gene Name	CDK5R1 elisa kit
Product Synonym Names	CDK5R1/Cyclin-dependent kinase 5 activator 1/CDK5 activator 1/Cyclin-dependent kinase 5 regulatory subunit 1/TPKII regulatory subunit/CDK5R/NCK5A
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.156-10ng/ml
Sensitivity	0.094ng/ml
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Molecular Weight	34,060 Da
OMIM	603460
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CDK5R1 elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-Human CDK5R1 antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human CDK5R1 antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were 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 CDK5R1 amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human CDK5R1 can be calculated.
Other Notes	Small volumes of CDK5R1 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CDK5R1 purchase	MBS764766 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cyclin-dependent kinase 5 activator 1 (CDK5R1) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CDK5R1. The ELISA analytical biochemical technique of the MBS764766 kit is based on CDK5R1 antibody-CDK5R1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CDK5R1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CDK5R1. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

Typical Data & Standard Curve

Results of a typical standard run of a Human CDK5R1 ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment. (N/A=not applicable)

X	ng/ml	0	0.156	0.313	0.625	1.25	2.5	5	10
Y	OD450	0.107	0.193	0.245	0.364	0.567	0.889	1.356	1.997

Typical Testing Data of CDK5R1 elisa kit



Typical Standard Curve of CDK5R1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDK5R1. It may not necessarily be applicable to this product.

NCBI GI #	4502737
NCBI GeneID	8851
NCBI Accession #	NP_003876.1
UniProt Secondary Accession #	Q5U0G3; E1P664
UniProt Related Accession #	Q15078
GenBank Nucleotide #	NM_003885.2
NCBI Official Full Name	cyclin-dependent kinase 5 activator 1
NCBI Official Synonym Full Names	cyclin-dependent kinase 5, regulatory subunit 1 (p35)
NCBI Official Symbol	CDK5R1
NCBI Official Synonym Symbols	p23; p25; p35; CDK5R; NCK5A; CDK5P35; p35nck5a
UniProt Protein Name	Cyclin-dependent kinase 5 activator 1
UniProt Synonym Protein Names	Cyclin-dependent kinase 5 regulatory subunit 1; TPKII regulatory subunit
Protein Family	Cyclin-dependent kinase 5 activator
UniProt Gene Name	CDK5R1
UniProt Synonym Gene Names	CDK5R; NCK5A; CDK5 activator 1; p35; p25; p23
UniProt Entry Name	CD5R1_HUMAN
NCBI Protein Information	cyclin-dependent kinase 5 activator 1
NCBI Summary for CDK5R1	The protein encoded by this gene (p35) is a neuron-specific activator of cyclin-dependent kinase 5 (CDK5); the activation of CDK5 is required for proper development of the central nervous system. The p35 form of this protein is proteolytically cleaved by calpain, generating a p25 form. The cleavage of p35 into p25 results in relocalization of the protein from the cell periphery to nuclear and perinuclear regions. P25 deregulates CDK5 activity by prolonging its activation and changing its cellular location. The p25 form accumulates in the brain neurons of patients with Alzheimer's disease. This accumulation correlates with an increase in CDK5 kinase activity, and may lead to aberrantly phosphorylated forms of the microtubule-associated protein tau, which contributes to Alzheimer's disease. [provided by RefSeq, Jul 2008]

UniProt Comments for CDK5R1	CDK5R1: activator of cyclin-dependent kinase 5 (CDK5). Required for proper development of the central nervous system. The p35 form of this protein is cleaved by calpain, generating a p25 form, resulting in the prolonged activation and relocalization of the CDK5 from the cell periphery to nuclear and perinuclear regions. The p25 form accumulates in the brain neurons of patients with Alzheimer's disease, leading to aberrantly phosphorylated forms of the microtubule-associated protein tau, which contributes to Alzheimer's disease. Protein type: Protein kinase, regulatory subunit Chromosomal Location of Human Ortholog: 17q11.2 Cellular Component: axon; cell soma; contractile fiber; cyclin-dependent protein kinase 5 activator complex; cytoplasm; cytosol; dendrite; dendritic spine; growth cone; intracellular membrane-bound organelle; membrane; neuromuscular junction; nucleoplasm; nucleus; perinuclear region of cytoplasm; plasma membrane; postsynaptic density Molecular Function: cadherin binding; calcium ion binding; cyclin-dependent protein kinase 5 activator activity; cyclin-dependent protein kinase activity; ephrin receptor binding; kinase activity; protein binding; protein kinase activity; protein kinase binding; protein serine/threonine kinase activator activity Biological Process: acetylcholine receptor signaling, muscarinic pathway; axon guidance; axonal fasciculation; brain development; cell proliferation; cerebellum development; embryonic development; ephrin receptor signaling pathway; hippocampus development; ionotropic glutamate receptor signaling pathway; layer formation in the cerebral cortex; negative regulation of axon extension; negative regulation of transcription, DNA-dependent; neurite development; neuron adhesion; neuron differentiation; neuron migration; peptidyl-serine phosphorylation; peptidyl-threonine phosphorylation; positive regulation of neuron apoptosis; regulation of actin cytoskeleton organization and biogenesis; regulation of cyclin-dependent protein kinase activity; regulation of neuron differentiation; rhythmic process; serine phosphorylation of STAT3 protein; superior olivary nucleus maturation
Research Articles on CDK5R1	**1.** Under cell-free in vitro conditions, p35 is covalently modified by SUMO1. SUMO2 is conjugated to p35 in cells. The 2 major SUMO acceptor lysines in p35 are K246 and K290. Different degrees of oxidative stress resulted in differential p35 sumoylation.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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