

Datasheet for ABIN1889361
STK4 ELISA Kit[Go to Product page](#)

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Overview

Quantity:	96 tests
Target:	STK4
Binding Specificity:	AA 19-716
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	156-10.000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse MSP/MST1
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: CHO Immunogen sequence: Q19-E716
Specificity:	Expression system for standard: CHO Immunogen sequence: Q19-E716
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity: <10pg/mL

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: STK4

Alternative Name: Serine/threonine-protein kinase 4 ([STK4 Products](#))

Background: Protein Function: Stress-activated, pro-apoptotic kinase which, following caspase-cleavage, enters the nucleus and induces chromatin condensation followed by internucleosomal DNA fragmentation. Key component of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. The core of this pathway is composed of a kinase cascade wherein STK3/MST2 and STK4/MST1, in complex with its regulatory protein SAV1, phosphorylates and activates LATS1/2 in complex with its regulatory protein MOB1, which in turn phosphorylates and inactivates YAP1 oncoprotein and WWTR1/TAZ. Phosphorylation of YAP1 by LATS2 inhibits its translocation into the nucleus to regulate cellular genes important for cell proliferation, cell death, and cell migration. STK3/MST2 and STK4/MST1 are required to repress proliferation of mature hepatocytes, to prevent activation of facultative adult liver stem cells (oval cells), and to inhibit tumor formation. Phosphorylates 'Ser-14' of histone H2B (H2BS14ph) during apoptosis. Phosphorylates FOXO3 upon oxidative stress, which results in its nuclear translocation and cell death initiation. Phosphorylates MOBKL1A, MOBKL1B and RASSF2. Phosphorylates TNNT3 (cardiac Tn-I) and alters its binding affinity to TNNT1 (cardiac Tn-C) and TNNT2 (cardiac Tn-T). Phosphorylates FOXO1 on 'Ser-212' and regulates its activation and stimulates transcription of PMAIP1 in a FOXO1-dependent manner. Phosphorylates SIRT1 and inhibits SIRT1-mediated p53/TP53 deacetylation, thereby promoting p53/TP53 dependent transcription and apoptosis upon DNA damage. Acts as an inhibitor of PKB/AKT1. Phosphorylates AR on 'Ser-650' and suppresses its activity by intersecting with PKB/AKT1 signaling and antagonizing formation of AR-chromatin complexes (By similarity).

Background: Macrophage Stimulating 1(SMT1), also known as Hepatocyte growth factor-like protein(HGFL) and MSP, is a protein that in humans is encoded by the MST1 gene. The HGFL gene was identified at the DNF15S2 locus on human chromosome 3(3p21). The RON tyrosine kinase), the receptor for MSP, is expressed on the ciliated epithelia of the mucociliary transport

Target Details

apparatus of the lung. Furthermore, MSP stimulated ciliary motility in these cells by activating RON.

Synonyms: Hepatocyte growth factor-like protein, Macrophage stimulatory protein, MSP, Hepatocyte growth factor-like protein alpha chain, Hepatocyte growth factor-like protein beta chain, Mst1, Hgfl,

Full Gene Name: Hepatocyte growth factor-like protein

Cellular Localisation: Secreted.

Gene ID: 15235

UniProt: [P26928](#)

Pathways: [Tube Formation](#)

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: Sequence similarities: Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily.

Tissue Specificity: Liver. Lower levels in lung, placenta and adrenal.

Plate: Pre-coated

Protocol: mouse MSP ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for MSP has been precoated onto 96-well plates. Standards (CHO, Q19-E716) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MSP 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 mouse MSP amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL mouse MSP 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 mouse cell culture supernates, serum or plasma (heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse MSP standard solution and each sample be measured in duplicate.

Application Details

Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 927, Standard deviation: 53.77, CV(%): 5.8• Sample 2: n=16, Mean(pg/ml): 2438, Standard deviation: 134.1, CV(%): 5.5• Sample 3: n=16, Mean(pg/ml): 5438, Standard deviation: 234, CV(%): 4.3,• Sample 1: n=24, Mean(pg/ml): 1241, Standard deviation: 83.15, CV(%): 6.7• Sample 2: n=24, Mean(pg/ml): 2655, Standard deviation: 162, CV(%): 6.1• Sample 3: n=24, Mean(pg/ml): 5632, Standard deviation: 366, CV(%): 6.5
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Restrictions:	For Research Use only
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Handling

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

