

Mouse SHP-2 ELISA Kit (PTPN11) αb206309

Recombinant SimpleStep ELISA®

5 Images

Overview

Product name	Mouse SHP-2 ELISA Kit (PTPN11)				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	PC12 extract	5			= 2.7%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	PC12 extract	3			= 4.1%
Sample type	Cell culture extracts, Tissue Extracts				
Assay type	Sandwich (quantitative)				
Sensitivity	239 pg/ml				
Range	0.63 ng/ml - 40 ng/ml				
Recovery	Sample specific recovery				
	Sample type	Average %		Range	
	Cell culture extracts	103		95% - 112%	
Assay time	1h 30m				
Assay duration	One step assay				
Species reactivity	Reacts with: Mouse				
Product overview	Mouse SHP-2 ELISA Kit (PTPN11) (ab206309) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of SHP-2 (PTPN11) protein in cell culture extracts and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse SHP-2 (PTPN11) with 239 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.

**Notes** SHP-2 (Tyrosine-protein phosphatase non-receptor type 11 or PTPN11) is a widely expressed protein tyrosine phosphatase that functions in intracellular signal transduction. SHP-2 contains two phospho-tyrosine binding Src homology domains. SHP-2 is mutated in Noonan syndrome 1. Human, mouse and rat SHP-2 have >99% sequence identity on the amino acid level.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

**Platform** Pre-coated microplate (12 x 8 well strips)

## Properties

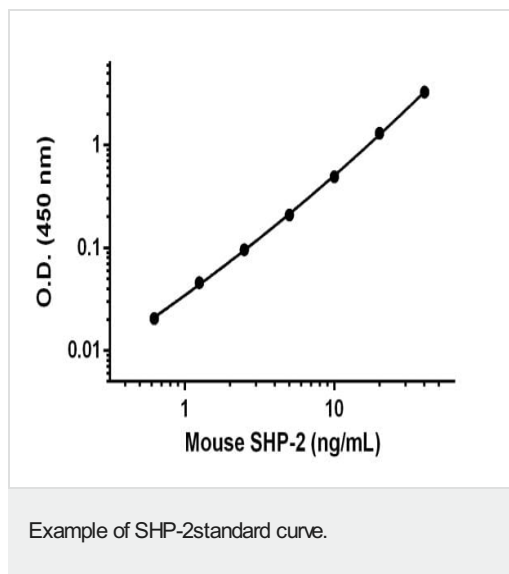
**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse SHP-2 Capture Antibody	1 x 600µl
10X Mouse SHP-2 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent CPI2	1 x 6ml
Mouse SHP-2 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit

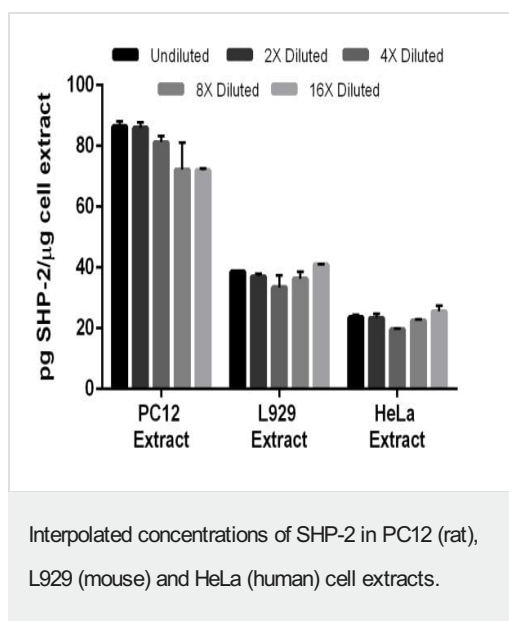
Components	1 x 96 tests
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

<b>Function</b>	Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus.
<b>Tissue specificity</b>	Widely expressed, with highest levels in heart, brain, and skeletal muscle.
<b>Involvement in disease</b>	<p>Defects in PTPN11 are the cause of LEOPARD syndrome type 1 (LEOPARD1) [MIM:151100]. It is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, abnormalities of genitalia, retardation of growth, and deafness.</p> <p>Defects in PTPN11 are the cause of Noonan syndrome type 1 (NS1) [MIM:163950]. Noonan syndrome (NS) is a disorder characterized by dysmorphic facial features, short stature, hypertelorism, cardiac anomalies, deafness, motor delay, and a bleeding diathesis. Some patients with Noonan syndrome type 1 develop multiple giant cell lesions of the jaw or other bony or soft tissues, which are classified as pigmented villomoduolar synovitis (PVNS) when occurring in the jaw or joints. Note=Mutations in PTPN11 account for more than 50% of the cases. Rarely, NS is associated with juvenile myelomonocytic leukemia (JMML). NS1 inheritance is autosomal dominant.</p> <p>Defects in PTPN11 are a cause of juvenile myelomonocytic leukemia (JMML) [MIM:607785]. JMML is a pediatric myelodysplastic syndrome that constitutes approximately 30% of childhood cases of myelodysplastic syndrome (MDS) and 2% of leukemia. It is characterized by leukocytosis with tissue infiltration and in vitro hypersensitivity of myeloid progenitors to granulocyte-macrophage colony stimulating factor.</p> <p>Defects in PTPN11 are a cause of metachondromatosis (MC) [MIM:156250]. It is a skeletal disorder with radiologic fetarures of both multiple exostoses and Ollier disease, characterized by the presence of multiple enchondromas and osteochondroma-like lesions.</p>
<b>Sequence similarities</b>	<p>Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily.</p> <p>Contains 2 SH2 domains.</p> <p>Contains 1 tyrosine-protein phosphatase domain.</p>
<b>Domain</b>	The SH2 domains repress phosphatase activity. Binding of these domains to phosphotyrosine-containing proteins relieves this auto-inhibition, possibly by inducing a conformational change in the enzyme.
<b>Post-translational modifications</b>	Phosphorylated on Tyr-546 and Tyr-584 upon receptor protein tyrosine kinase activation; which creates a binding site for GRB2 and other SH2-containing proteins.
<b>Cellular localization</b>	Cytoplasm.

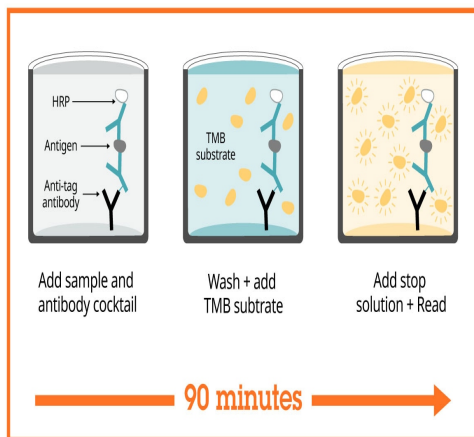
## Images



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



The concentrations of SHP-2 were measured in duplicate and interpolated from the SHP-2 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD,  $n=2$ ). The mean SHP-2 concentration was determined to be 79.6 pg/ $\mu$ g PC12 cell extract, 37.3 pg/ $\mu$ g L929 cell extract, and 23 pg/ $\mu$ g HeLa cell extract.



Sandwich ELISA - Mouse SHP-2 ELISA Kit  
(PTPN11) (ab206309)

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 SHP-2 ELISA Kit  
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To learn more about the advantages of recombinant antibodies see [here](#).

**Get more done with  
SimpleStep ELISA**



**Easy to use**

Single-wash 90-minute protocol



**Flexible**

Matched antibody pairs available



**Precision antibodies**

High sensitivity, specificity and reproducibility



**Scalable**

Now in 10-pack and 384-well formats

Sandwich ELISA - Mouse SHP-2 ELISA Kit  
(PTPN11) (ab206309)

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"

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