

Human MRP1 ELISA Kit (ABCC1) αb272211

KO VALIDATED Recombinant SimpleStep ELISA

5 Images

Overview

Product name	Human MRP1 ELISA Kit (ABCC1)				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Extract	8			2.9%
Sample type	Tissue Extracts, Cell Lysate				
Assay type	Sandwich (quantitative)				
Sensitivity	0.151 ng/ml				
Range	0.63 ng/ml - 40 ng/ml				
Recovery	Sample specific recovery				
	Sample type	Average %		Range	
	Tissue Extracts	95		94% - 96%	
	Cell Lysate	94		91% - 97%	
Assay time	1h 30m				
Assay duration	One step assay				
Species reactivity	Reacts with: Human				
Product overview	Human MRP1 ELISA kit (ab272211) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of MRP1 protein in cell and tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human MRP1 with 151 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

MRP1 (Multidrug Resistance-associated Protein 1), also known as ABCC1 (ATP-Binding Cassette sub-family C member 1), mediates export of organic anions and drugs from the cytoplasm. It mediates ATP-dependent transport of glutathione and glutathione conjugates, leukotriene C4, estradiol-17-beta-o-glucuronide, methotrexate, antiviral drugs and other xenobiotics. MRP1 confers resistance to anticancer drugs by decreasing accumulation of drug in cells, and by mediating ATP- and GSH-dependent drug export.

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 Human MRP1 (ABCC1) Capture Antibody	1 x 600µl
10X Human MRP1 (ABCC1) 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 4BI	1 x 6ml
Human MRP1 (ABCC1) Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 12ml

Components	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function

Mediates export of organic anions and drugs from the cytoplasm. Mediates ATP-dependent transport of glutathione and glutathione conjugates, leukotriene C4, estradiol-17-beta-o-glucuronide, methotrexate, antiviral drugs and other xenobiotics. Confers resistance to anticancer drugs. Hydrolyzes ATP with low efficiency.

Tissue specificity

Lung, testis and peripheral blood mononuclear cells.

Sequence similarities

Belongs to the ABC transporter superfamily. ABCC family. Conjugate transporter (TC 3.A.1.208) subfamily.

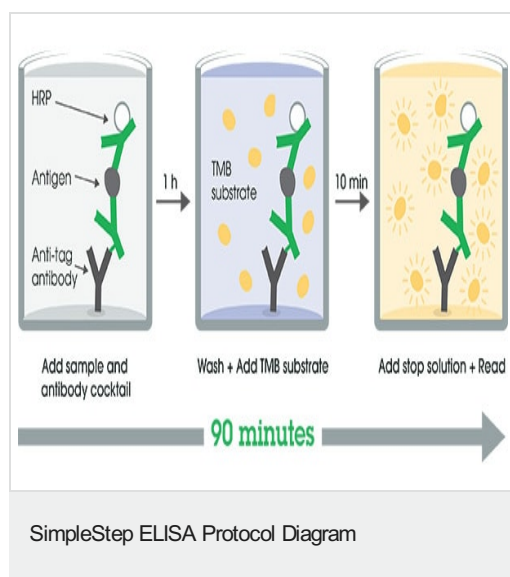
Contains 2 ABC transmembrane type-1 domains.

Contains 2 ABC transporter domains.

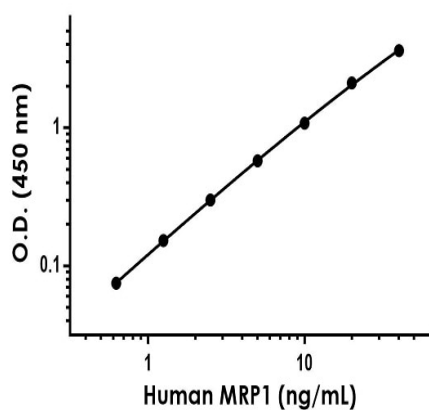
Cellular localization

Cell membrane.

Images

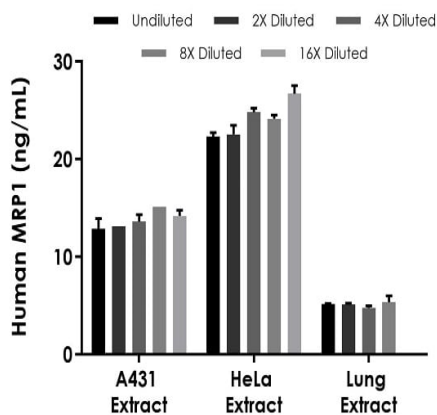


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



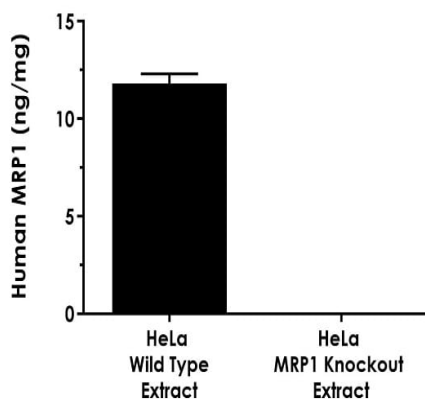
Example of human MRP1 standard curve in 1X Cell Extractio Buffer PTR.

The MRP1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean \pm SD) are graphed.



Interpolated concentrations of native MRP1 in human A431 cell, HeLa cell and lung tissue based on 150 μ g/mL, 600 μ g/mL and 1,000 μ g/mL extract loads, respectively.

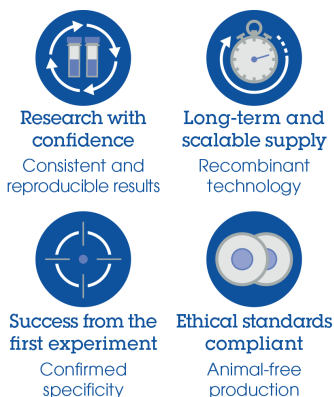
The concentrations of MRP1 were measured in duplicate and interpolated from the MRP1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean MRP1 concentration was determined to be 13.6 ng/mL in A431 extract, 24.1 ng/mL in HeLa extract and 5.1 ng/mL in lung extract.



Interpolated concentrations of native MRP1 in human control wild type HeLa cell and MRP1 knockout HeLa cell based on 200 µg/mL extract loads.

The concentrations of MRP1 were measured in duplicate and interpolated from the MRP1 standard curve and expressing the interpolated concentrations as ng of protein per mg of extract (mean \pm SD, n=2). The mean MRP1 concentration was determined to be 11.8 ng/mg in wild type HeLa extract and undetectable in MRP1 knockout HeLa extract.

Powered by
recombinant antibodies



Sandwich ELISA - Human MRP1 ELISA Kit
(ABCC1) (ab272211)

To learn more about the advantages of recombinant antibodies see [here](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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