abcam

Product datasheet

Human Acid sphingomyelinase ELISA Kit (SMPD1) ab277075

重组 SimpleStep ELISA

1 References 5 图像

概述

产品名称 人Acid sphingomyelinase ELISA试剂盒(SMPD1)

检测方法 Colorimetric

精确度

批次内

样品	n	Mean	SD	CV%
Serum	8			4.9%

批次间

样品	n	Mean	SD	CV%
Serum	0			0%

样品类型 Serum, Cell culture media, Hep Plasma, EDTA Plasma

检测类型 Sandwich (quantitative)

灵敏度 17.33 pg/ml

范围 125 pg/ml - 8000 pg/ml

回收率

特定样本回收率

样品类型	平均%	范围
Serum	102	% - %
Cell culture media	96	% - %
Hep Plasma	98	% - %
EDTA Plasma	103	% - %

检测时间 1h 30m

实验步骤 One step assay

种属反应性 **与反应:** Human

产品概述

Human Acid sphingomyelinase ELISA kit (ab277075) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Acid sphingomyelinase protein in human serum, plasma - heparin, plasma - edta, and cell culture media. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Acid sphingomyelinase with 17.33 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.

说明

Acid Sphingomyelinase is an enzyme that converts sphingomyelin to ceramide. Mutations in Acid Sphingomyelinase are associated with Niemann-Pick disease A. A SNP in Acid Sphingomyelinase is a risk factor for Parkinson disease.

平台

Pre-coated microplate (12 x 8 well strips)

性能

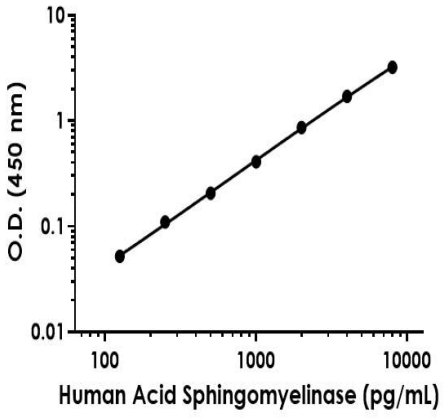
存放说明

Store at +4°C. Please refer to protocols.

组件	1 x 96 tests
10X Human Acid Sphingomyelinase (SMPD1) Capture Antibody	1 x 600µl
10X Human Acid Sphingomyelinase (SMPD1) Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Human Acid Sphingomyelinase (SMPD1) 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
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

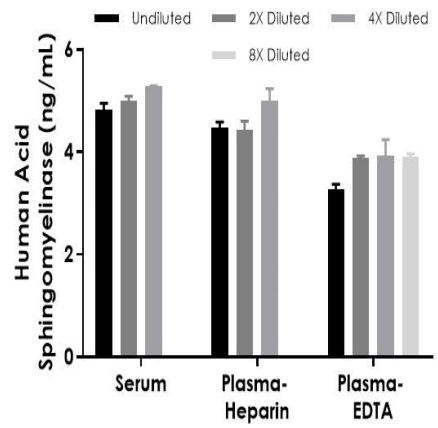
功能	Converts sphingomyelin to ceramide. Also has phospholipase C activities toward 1,2-diacylglycerolphosphocholine and 1,2-diacylglycerolphosphoglycerol. Isoform 2 and isoform 3 have lost catalytic activity.
疾病相关	Defects in SMPD1 are the cause of Niemann-Pick disease type A (NPDA) [MIM:257200]; also known as Niemann-Pick disease classical infantile form. It is an early-onset lysosomal storage disorder caused by failure to hydrolyze sphingomyelin to ceramide. It results in the accumulation of sphingomyelin and other metabolically related lipids in reticuloendothelial and other cell types throughout the body, leading to cell death. Niemann-Pick disease type A is a primarily neurodegenerative disorder characterized by onset within the first year of life, mental retardation, digestive disorders, failure to thrive, major hepatosplenomegaly, and severe neurologic symptoms. The severe neurological disorders and pulmonary infections lead to an early death, often around the age of four. Clinical features are variable. A phenotypic continuum exists between type A (basic neurovisceral) and type B (purely visceral) forms of Niemann-Pick disease, and the intermediate types encompass a cluster of variants combining clinical features of both types A and B. Defects in SMPD1 are the cause of Niemann-Pick disease type B (NPDB) [MIM:607616]; also known as Niemann-Pick disease visceral form. It is a late-onset lysosomal storage disorder caused by failure to hydrolyze sphingomyelin to ceramide. It results in the accumulation of sphingomyelin and other metabolically related lipids in reticuloendothelial and other cell types throughout the body, leading to cell death. Clinical signs involve only visceral organs. The most constant sign is hepatosplenomegaly which can be associated with pulmonary symptoms. Patients remain free of neurologic manifestations. However, a phenotypic continuum exists between type A (basic neurovisceral) and type B (purely visceral) forms of Niemann-Pick disease, and the intermediate types encompass a cluster of variants combining clinical features of both types A and B. In Niemann-Pick disease type B, onset of the first symptoms occurs in early childhood and patients can survive into adulthood.
序列相似性	Belongs to the acid sphingomyelinase family. Contains 1 saposin B-type domain.
细胞定位	Lysosome.

图片



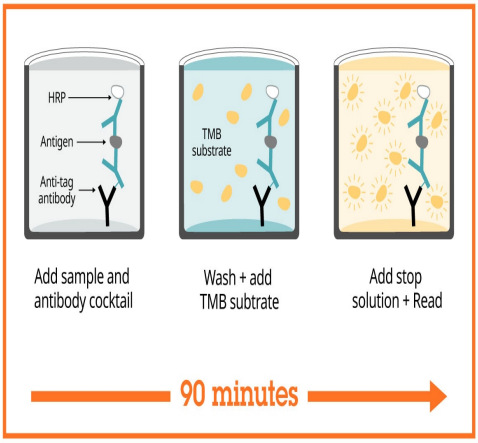
Example of human Acid Sphingomyelinase standard curve in Sample Diluent NS.

The Acid Sphingomyelinase standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



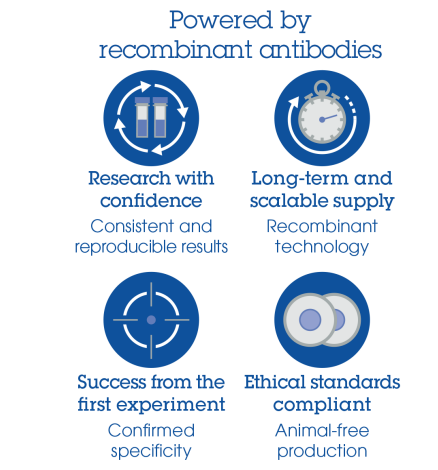
Interpolated concentrations of native Acid Sphingomyelinase in human serum, plasma (heparin), and plasma (EDTA) samples.

The concentrations of Acid Sphingomyelinase were measured in duplicates, interpolated from the target standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (heparin) 25%, and plasma (EDTA) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean target concentration was determined to be 5.04 ng/ml in serum, 4.63 ng/ml in plasma (heparin), and 3.75 ng/ml in plasma (EDTA).



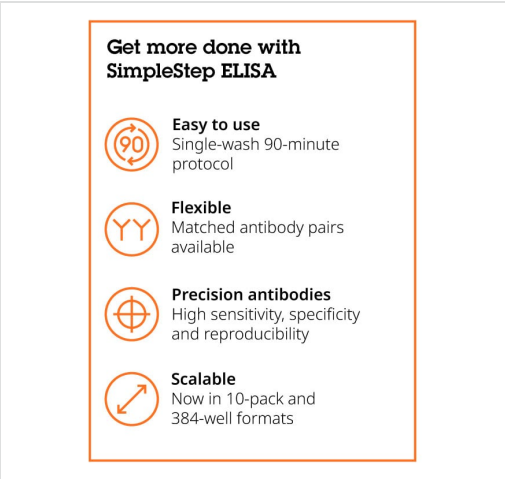
Sandwich ELISA - Human Acid sphingomyelinase ELISA Kit (SMPD1) (ab277075)

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.



Sandwich ELISA - Human Acid sphingomyelinase ELISA Kit (SMPD1)

To learn more about the advantages of recombinant antibodies see **here**.



Sandwich ELISA - Human Acid sphingomyelinase ELISA Kit (SMPD1) (ab277075)

To learn more about the advantages of SimpleStep ELISA® kits see **here**.

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