

Sphingomyelinase Assay Kit (Colorimetric) ab138876

6 References 画像数 1

製品の概要

製品名	Sphingomyelinase Assay Kit (Colorimetric)
検出方法	Colorimetric
サンプルの種類	Cell culture extracts, Whole Blood
アッセイタイプ	Enzyme activity
検出感度	0.08 mU/ml
種交差性	交差種: Mammals, Other species
製品の概要	<p>Sphingomyelinase Assay Kit (Colorimetric) (ab138876) provides a sensitive method for detecting neutral SMase activity or screening its inhibitors. The kit uses our proprietary AbBlue Indicator as a colorimetric probe to indirectly quantify the phosphocholine produced from the hydrolysis of sphingomyelin (SM) by sphingomyelinase (SMase).</p> <p>The sphingomyelinase assay can be used for measuring the SMase activity in blood, cell extracts or other solutions. The absorbance of light at 655 nm is proportional to the formation of phosphocholine, therefore to the SMase activity. The kit is an optimized “mix and read” assay that is compatible with HTS liquid handling instruments.</p>
特記事項	<p>Sphingomyelinase (SMase) is an enzyme that is responsible for cleaving sphingomyelin (SM) to phosphocholine and ceramide. Activation of SMases in cells plays an important role in the cellular responses. Five types of sphingomyelinase (SMase) have been identified based on their cation dependence and pH optima of action. They are lysosomal acid SMase, secreted zinc-dependent acid SMase, magnesium-dependent neutral SMase, magnesium-independent neutral SMase, and alkaline SMase.</p>
試験プラットフォーム	Microplate reader

製品の特性

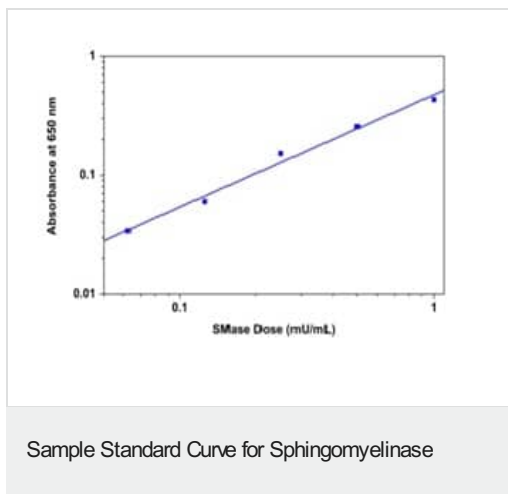
保存方法 Store at -20°C. Please refer to protocols.

内容	200 tests
AbBlue Indicator	1 vial
Assay Buffer	1 x 20ml

内容	200 tests
DMSO	1 x 200μl
Enzyme Mix	2 vials
SMase Reaction Buffer	1 x 10ml
Sphingomyelin	1 x 100μl
Sphingomyelinase Standard	1 x 0.2 unit

機能	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.
関連疾患	<p>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.</p> <p>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.</p>
配列類似性	<p>Belongs to the acid sphingomyelinase family.</p> <p>Contains 1 saposin B-type domain.</p>
細胞内局在	Lysosome.

画像



Sphingomyelinase dose response was measured on a 96-well plate with ab138876 using a microplate reader. As low as 0.08 mU/ml sphingomyelinase can be detected with 60 minutes incubation (n=3).

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