abcam

Product datasheet

SIRT3 Activity Assay Kit (Fluorometric) ab156067

★★★★★ 1 Abreviews 14 References 2 图像

概述

产品名称 SIRT3 Activity Assay试剂盒(Fluorometric)

检测方法 Fluorescent

样品类型 Cell culture extracts, Tissue Extracts

检测类型 Enzyme activity

检测时间 0h 40m

种属反应性 与反应: Human

产品概述 Abcam's SIRT3 Activity Assay Kit (Fluorometric) (ab156067) detects SIRT3 activity in lysates.

Primarily, the SIRT3 Activity Assay Kit (Fluorometric) is designed for the rapid and sensitive evaluation of SIRT3 inhibitors or activators using crude SIRT3 fraction or purified SIRT3.

Applications for this kit include:

- 1. Screening inhibitors or activators of SIRT3.
- 2. Detecting the effects of pharmacological agents on SIRT3.

SIRT3 assay protocol summary:

- add assay buffer, substrate peptide and NAD to wells
- add developer to wells
- add enzyme sample or recombinant SIRT3 to wells
- analyze with microplate reader for 30-60 min every 1-2 min

Histone Deacetylases (HDACs) are a class of enzymes responsible for the deacetylation of lysine residues on the N-terminal part of the core histones (H2A, H2B, H3 and H4), allowing the histones to wrap the DNA more tightly.

HDAC proteins occur in four groups (class I, class IIA, class IIB, class III, class IV) based on function and DNA sequence similarity.

Classes I, IIA and IIB are considered "classical" HDACs whose activities are inhibited by trichostatin A (TSA), whereas class III is a family of NAD+-dependent proteins (sirtuins) not affected by TSA. Class IV is considered an atypical class on its own, based solely on DNA sequence similarity to the others.

说明

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性能

存放说明 Please refer to protocols.

组件	100 tests	100 tests
Developer	1 x 500µl	1 x 500µl
Fluoro-Deacetylated Peptide (0.2 mM)	1 x 100µl	1 x 100µl
Fluoro-Substrate Peptide (0.2 mM)	1 x 500µl	1 x 500µl
NAD (2 mM)	1 x 500µl	1 x 500µl
Recombinant SIRT3	1 x 500µl	1 x 500µl
SIRT Assay Buffer	2 x 1ml	2 x 1ml
Stop Solution	2 x 1ml	2 x 1ml

功能 NAD-dependent protein deacetylase. Activates or deactivates mitochondrial target proteins by

deacetylating key lysine residues. Known targets include ACSS1, IDH, GDH, SOD2, PDHA1, LCAD, SDHA and the ATP synthase subunit ATP50. Contributes to the regulation of the cellular

energy metabolism. Important for regulating tissue-specific ATP levels.

组织特异性 Widely expressed.

序列相似性 Belongs to the sirtuin family. Class I subfamily.

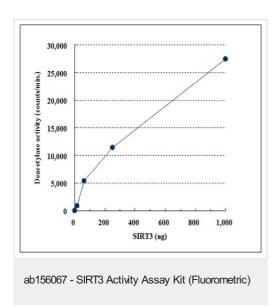
Contains 1 deacetylase sirtuin-type domain.

翻译后修饰 Processed by mitochondrial processing peptidase (MPP) to give a 28 kDa product. Such

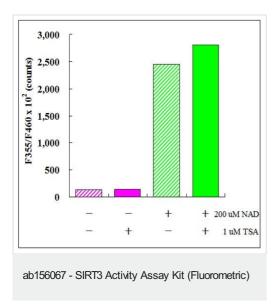
processing is probably essential for its enzymatic activity.

细胞定位 Mitochondrion matrix.

图片



Dose dependency curve of recombinant SIRT3 activity



Effect of Trichostatin A and NAD on recombinant SIRT3 activity

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