

Product datasheet

SIRT5 peptide ab123888

Overview

Product name SIRT5 peptide

Description

Nature Synthetic

Specifications

Our [Abpromise guarantee](#) covers the use of **ab123888** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications Blocking

Form Liquid

Preparation and Storage

Stability and Storage Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.

Constituent: PBS

General Info

Function NAD-dependent lysine demalonylase, desuccinylase and deglutarylase that specifically removes malonyl, succinyl and glutaryl groups on target proteins (PubMed:21908771, PubMed:22076378, PubMed:24703693). Activates CPS1 and contributes to the regulation of blood ammonia levels during prolonged fasting: acts by mediating desuccinylation and deglutarylation of CPS1, thereby increasing CPS1 activity in response to elevated NAD levels during fasting (PubMed:22076378, PubMed:24703693). Activates SOD1 by mediating its desuccinylation, leading to reduced reactive oxygen species (PubMed:24140062). Modulates ketogenesis through the desuccinylation and activation of HMGCS2 (By similarity). Has weak NAD-dependent protein deacetylase activity; however this activity may not be physiologically relevant in vivo. Can deacetylate cytochrome c (CYCS) and a number of other proteins in vitro such as UOX.

Tissue specificity Widely expressed.

Sequence similarities Belongs to the sirtuin family. Class III subfamily.
Contains 1 deacetylase sirtuin-type domain.

Domain In contrast to class I sirtuins, class III sirtuins have only weak deacetylase activity. Difference in

substrate specificity is probably due to a larger hydrophobic pocket with 2 residues (Tyr-102 and Arg-105) that bind to malonylated and succinylated substrates and define the specificity (PubMed:22076378).

Cellular localization

Mitochondrion; Cytoplasm. Mitochondrion and Mitochondrion matrix. Mitochondrion intermembrane space. Cytoplasm, cytosol. Nucleus. Mainly mitochondrial. Also present extramitochondrially: a fraction is present in the cytosol and very small amounts are also detected in the nucleus.

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