Human Sirtuin 3/SIRT3 Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7488G
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Situin 3/SIRT3 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human SIRT2 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human Sirtuin 3/SIRT3 Ser101-Lys399 Accession # Q9NTG7
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

SIRT3 (SIR2-like protein 3) is a 28-30 kDa, NAD^+-dependent class III member of the sirtuin protein family. It is widely expressed, and found apparently in both the nucleus, where it deacetylates histones, and in the mitochondrial matrix, where it is involved in the regulation of both oxidative stress and the physiology associated with fasting or caloric restriction. Relative to the mitochondria, SIRT3 deacetylates multiple enzyme substrates, including SOD2, IDH2, LCAD, OTC and HMGCS2, an action that results in enzyme activation. Human SIRT3 is 399 amino acids (aa) in length. It contains a mitochondrial targeting sequence within the first 100 aa, followed by a sertuin-type deacetylase domain (aa 126-382) that contains an NAD binding segment (aa 145-165). Although uncertainty exists relative to its intracellular location, it would appear that SIRT3 is initially synthesized as a 42-44 kDa "precursor" in the cytosol. From here, it can translocate into mitochondria where it is cleaved between Arg99Arg100 to generate a 28-30 kDa short form. There is one potential alternative start site at Met143. Over aa 101-399, human and mouse SIRT3 share 84% aa sequence identity.

PRODUCT SPECIFIC NOTICES

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