SANTA CRUZ BIOTECHNOLOGY, INC.

ALAS-E (N-20): sc-32334

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

5-aminolevulinate synthase 1 (ALAS-H) and 2 (ALAS-E) are two isoforms of ALAS, an enzyme catalyzing the first step of the heme biosynthetic pathway in mammals. The erythroid-specific isoenzyme, ALAS-E, regulates the first step of hematopoietic cell differentation and iron metabolism in the liver. ALAS-H is a housekeeping protein which mediates synthesis of early heme in the mitochondria of most cells. Succinyl CoA associates with ALAS-E in protein conformation change and translocation of ALAS-E into the mitochondria and does not interact with ALAS-H. The ALAS-E 5'-flanking region contains binding sites for nuclear activators such as GATA-1, NF-E2 and EKLF. Since the ALAS gene maps to the X chromosome, mutation of the gene leads to the pyridoxine-refractory X-linked sideroblastic anemia.

CHROMOSOMAL LOCATION

Genetic locus: ALAS2 (human) mapping to Xp11.21; Alas2 (mouse) mapping to X F3.

SOURCE

ALAS-E (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ALAS-E of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32334 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ALAS-E (N-20) is recommended for detection of precursor and mature ALAS-E of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ALAS-E (N-20) is also recommended for detection of precursor and mature ALAS-E in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ALAS-E siRNA (h): sc-44726, ALAS-E siRNA (m): sc-44727, ALAS-E shRNA Plasmid (h): sc-44726-SH, ALAS-E shRNA Plasmid (m): sc-44727-SH, ALAS-E shRNA (h) Lentiviral Particles: sc-44726-V and ALAS-E shRNA (m) Lentiviral Particles: sc-44727-V.

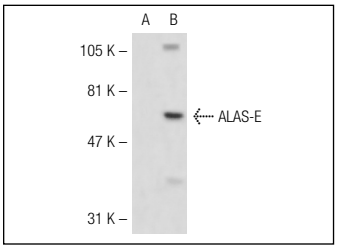
Molecular Weight of ALAS-E: 65/60 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, ALAS-E (h): 293T Lysate: sc-114245 or mouse heart extract: sc-2254.

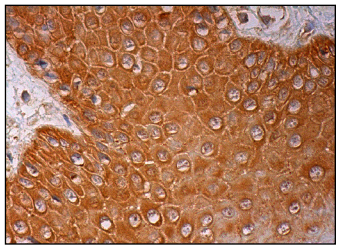
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ALAS-E (N-20): sc-32334. Western blot analysis of ALAS-E expression in non-transfected: sc-117752 (**A**) and human ALAS-E transfected: sc-114245 (**B**) 293T whole cell lysates.



ALAS-E (N-20): sc-32334. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.