SANTA CRUZ BIOTECHNOLOGY, INC.

Tom22 (L-16): sc-14894

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The mitochondrial preprotein translocases of the outer membrane (Tom) is a multisubunit protein complex that facilitates the import of nucleus-encoded precursor proteins across the mitochondrial outer membrane. The Tom machinery consists of import receptors for the initial binding of cytosolically synthesized preproteins and a general import pore (GIP) for the membrane translocation of various preproteins into the mitochondria. The import receptors include Tom20 and Tom22, which form a heteromeric receptor complex that initiates the insertion of newly synthesized proteins into the outer membrane and then directs the precursor protein into the GIP. In yeast, Tom22 is the essential component of the import receptor complex, as it functions as a receptor for the preproteins and serves as a docking point for both Tom20 and the GIP. Tom22 directly associates with Tom40, the major component of the GIP, and forms a stable interaction between the two core complexes. This interactions facilitates the fluid movement of preproteins into the mitochondria. Structural features of Tom22 include an N-terminal negatively charged region exposed to the cytosol, a C-terminal innermembrane space region with little negative charge, and a putative transmembrane region. The gene encoding human Tom22 maps to chromosome 22q13.1.

CHROMOSOMAL LOCATION

Genetic locus: TOMM22 (human) mapping to 22q13.1; Tomm22 (mouse) mapping to 15 E1.

SOURCE

Tom22 (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tom22 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-14894 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tom22 (L-16) is recommended for detection of Tom22 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Tom22 (L-16) is also recommended for detection of Tom22 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Tom22 siRNA (h): sc-41265, Tom22 siRNA (m): sc-41266, Tom22 shRNA Plasmid (h): sc-41265-SH, Tom22 shRNA Plasmid (m): sc-41266-SH, Tom22 shRNA (h) Lentiviral Particles: sc-41265-V and Tom22 shRNA (m) Lentiviral Particles: sc-41266-V.

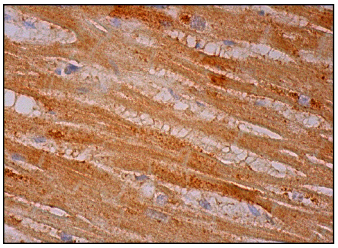
Molecular Weight of Tom22: 22 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

DATA



Tom22 (L-16): sc-14894. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

STORAGE

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

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.