SANTA CRUZ BIOTECHNOLOGY, INC.

RAG-2 (L-20): sc-34272

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Immunoglobulin (Ig) and T cell receptors of B and T lymphocytes are encoded in multiple germ line DNA segments known as V, D and J, that are rearranged during lymphocyte development. V(D)J recombination is a site specific recombination event in vertebrate genes. The assembly of antigen receptor genes by V(D)J recombination is initiated by a recombination activator genes 1 and 2 (RAG1/RAG2) protein complex, which introduces double-strand breaks between recombination signal sequences and their coding DNA. The RAG-1 and RAG-2 were originally identified on the basis of their ability to activate rearrangement of an exogenous recombinational substrate in fibroblasts; moreover, both genes are required for this activity. RAG1 and RAG2 proteins catalyze V(D)J are essential for generation of the diverse repertoire of antigen receptor genes and effective immune responses. RAG2 is composed of a "core" domain that is required for the recombination reaction and a C-terminal nonessential or "non-core" region. Activated mature CD5-positive human tonsil B cells coexpress both RAG1 and RAG2 mRNA and protein, and display DNA cleavage resulting from their recombinase activity.

CHROMOSOMAL LOCATION

Genetic locus: RAG2 (human) mapping to 11p12; Rag2 (mouse) mapping to 2 E2.

SOURCE

RAG-2 (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RAG-2 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-34272 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAG-2 (L-20) is recommended for detection of RAG-2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RAG-2 (L-20) is also recommended for detection of RAG-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RAG-2 siRNA (h): sc-36371, RAG-2 siRNA (m): sc-36372, RAG-2 shRNA Plasmid (h): sc-36371-SH, RAG-2 shRNA Plasmid (m): sc-36372-SH, RAG-2 shRNA (h) Lentiviral Particles: sc-36371-V and RAG-2 shRNA (m) Lentiviral Particles: sc-36372-V.

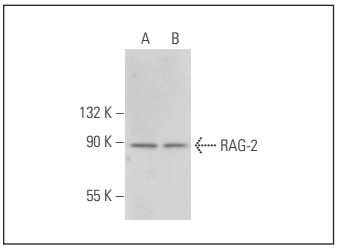
Molecular Weight of RAG-2: 58 kDa.

Positive Controls: mouse thymus extract: sc-2406 or Ramos cell lysate: sc-2216.

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.

DATA



RAG-2 (L-20): sc-34272. Western blot analysis of RAG-2 expression in mouse thymus tissue extract (**A**) and Ramos whole cell lysate (**B**).

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **RAG-2 (4D5C7): sc-517209**, our highly recommended monoclonal alternative to RAG-2 (L-20).