

RAG-1 (T-20): sc-34270

BACKGROUND

Immunoglobulin (Ig) and the T cell receptor are the receptors of B and T lymphocytes and are encoded in multiple germ line DNA segments, V, D and J, that are rearranged during lymphocyte development. This is the only known example of site specific recombination in vertebrate genes. Several genes are essential for V(D)J rearrangement. The recombination activator genes RAG1 and RAG2 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. It is yet to be resolved as to whether RAG1 and RAG2 encode components of the V(D)J recombinase itself or regulatory proteins that potentiate V(D)J recombination.

REFERENCES

1. Schatz, D.G., et al. 1989. The V(D)J recombination activating gene, RAG-1. *Cell* 59: 1035-1048.
2. Schatz, D.G., et al. 1992. V(D)J recombination: molecular biology and regulation. *Annu. Rev. Immunol.* 10: 359-383.

CHROMOSOMAL LOCATION

Genetic locus: RAG1 (human) mapping to 11p12; Rag1 (mouse) mapping to 2 E2.

SOURCE

RAG-1 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RAG-1 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-34270 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RAG-1 (T-20) is recommended for detection of RAG-1 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-1 (T-20) is also recommended for detection of RAG-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RAG-1 siRNA (h): sc-42962, RAG-1 siRNA (m): sc-42963, RAG-1 shRNA Plasmid (h): sc-42962-SH, RAG-1 shRNA Plasmid (m): sc-42963-SH, RAG-1 shRNA (h) Lentiviral Particles: sc-42962-V and RAG-1 shRNA (m) Lentiviral Particles: sc-42963-V.

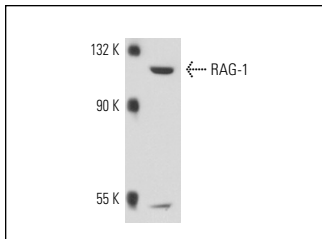
Molecular Weight of RAG-1: 130 kDa.

Positive Controls: LADMAC nuclear extract.

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-1 (T-20): sc-34270. Western blot analysis of RAG-1 expression in LADMAC nuclear extract.

SELECT PRODUCT CITATIONS

1. Mao, M.G., et al. 2012. Characterization of RAG1 and IgM (µ chain) marking development of the immune system in red-spotted grouper (*Epinephelus akaara*). *Fish Shellfish Immunol.* 33: 725-735.

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.



Try **RAG-1 (D-5): sc-377127**, our highly recommended monoclonal alternative to RAG-1 (T-20).