

Rag A (D-1): sc-518209

BACKGROUND

The Ras-related superfamily of guanine nucleotide binding proteins includes the R-Ras, Rap, Ral/Rec and Rho/Rab subfamilies all of which are thought to play an important role in either endocytosis or in biosynthetic protein transport. The process of transporting newly synthesized proteins from the endoplasmic reticulum (ER) to various stacks of the Golgi complex and to secretory vesicles involves the movement of carrier vesicles and requires Rab protein function. Rag A (Ras-related GTP binding A), also known as Rraga or FIP-1, is a 313 amino acid cytoplasmic and nuclear protein belonging to the GTR/RAG GTP-binding protein family. Involved in the RCC1/Ran-GTPase pathway, Rag A may play a direct role in a TNF α signaling pathway leading to induction of cell death. Rag A has guanine nucleotide-binding activity but undetectable intrinsic GTPase activity.

REFERENCES

- Huber, L.A., et al. 1994. Mapping of Ras-related GTP-binding proteins by GTP overlay following two-dimensional gel electrophoresis. *Proc. Natl. Acad. Sci. USA* 91: 7874-7878.
- Schürmann, A., et al. 1995. Cloning of a novel family of mammalian GTP-binding proteins (RagA, RagBs, RagB1) with remote similarity to the Ras-related GTPases. *J. Biol. Chem.* 270: 28982-28988.
- Hirose, E., et al. 1998. RagA is a functional homologue of *S. cerevisiae* Gtr1p involved in the Ran/Gsp1-GTPase pathway. *J. Cell Sci.* 111: 11-21.
- Sekiguchi, T., et al. 2001. Novel G proteins, Rag C and Rag D, interact with GTP-binding proteins, Rag A and Rag B. *J. Biol. Chem.* 276: 7246-7257.
- Sekiguchi, T., et al. 2004. A novel human nucleolar protein, Nop132, binds to the G proteins, RRAG A/C/D. *J. Biol. Chem.* 279: 8343-8350.

CHROMOSOMAL LOCATION

Genetic locus: RRAGA (human) mapping to 9p22.1; Rraga (mouse) mapping to 4 C4.

SOURCE

Rag A (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 287-313 of Rag A of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rag A (D-1) is available conjugated to agarose (sc-518209 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518209 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518209 PE), fluorescein (sc-518209 FITC), Alexa Fluor[®] 488 (sc-518209 AF488), Alexa Fluor[®] 546 (sc-518209 AF546), Alexa Fluor[®] 594 (sc-518209 AF594) or Alexa Fluor[®] 647 (sc-518209 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518209 AF680) or Alexa Fluor[®] 790 (sc-518209 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Rag A (D-1) is recommended for detection of Rag A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for Rag A siRNA (h): sc-92670, Rag A siRNA (m): sc-152683, Rag A shRNA Plasmid (h): sc-92670-SH, Rag A shRNA Plasmid (m): sc-152683-SH, Rag A shRNA (h) Lentiviral Particles: sc-92670-V and Rag A shRNA (m) Lentiviral Particles: sc-152683-V.

Molecular Weight of Rag A: 37 kDa.

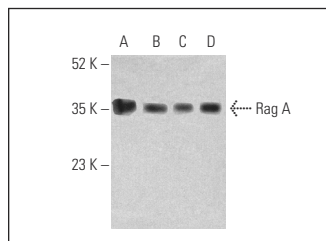
Positive Controls: BJ whole cell lysate: sc-364359, U-87 MG cell lysate: sc-2411 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SUPPORT REAGENTS

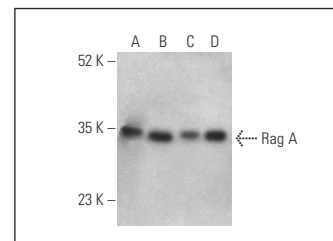
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Rag A (D-1): sc-518209. Western blot analysis of Rag A expression in BJ (A), U-87 MG (B), PANC-1 (C) and KNRK (D) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



Rag A (D-1): sc-518209. Western blot analysis of Rag A expression in BJ (A), U-87 MG (B), PANC-1 (C) and KNRK (D) whole cell lysates. Detection reagent used: m-IgG κ Fc BP-HRP: sc-525409.

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 for detailed protocols and support products.