

▶ RBJ (E-2): sc-390736

BACKGROUND

RBJ, also known as DNAJC27 (DnaJ homolog subfamily C member 27) or RABJS (Rab and DnaJ domain-containing protein), is a 273 amino acid member of both the small GTPase superfamily and the Rab family. Containing one J domain, RBJ is highly expressed in nervous system and reproductive organs, and may lack GTPase activity. Existing as three alternatively spliced isoforms, the RBJ gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 2p23.3. As the second largest human chromosome, chromosome 2 makes up approximately 8% of the human genome and contains 237 million bases encoding over 1,400 genes. A number of genetic diseases are linked to genes on chromosome 2. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alström syndrome, is related to mutations in the ALMS1 gene. Chromosome 2 contains a probable vestigial second centromere as well as vestigial telomeres, which gives credence to the hypothesis that human chromosome 2 formed as a result of an ancient fusion of two ancestral chromosomes, which are still present in modern day apes.

REFERENCES

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. *Proc. Natl. Acad. Sci. USA* 88: 9051-9055.
2. Nepomuceno-Silva, J.L., et al. 2004. RJs: a new family of Ras-related GTP-binding proteins. *Gene* 327: 221-232.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. *Nature* 434: 724-731.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. *J. Invest. Dermatol.* 126: 2408-2413.

CHROMOSOMAL LOCATION

Genetic locus: DNAJC27 (human) mapping to 2p23.3; Dnajc27 (mouse) mapping to 12 A1.1.

SOURCE

RBJ (E-2) is a mouse monoclonal antibody raised against amino acids 1-273 representing full length RBJ of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RBJ (E-2) is available conjugated to agarose (sc-390736 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390736 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390736 PE), fluorescein (sc-390736 FITC), Alexa Fluor® 488 (sc-390736 AF488), Alexa Fluor® 546 (sc-390736 AF546), Alexa Fluor® 594 (sc-390736 AF594) or Alexa Fluor® 647 (sc-390736 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390736 AF680) or Alexa Fluor® 790 (sc-390736 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

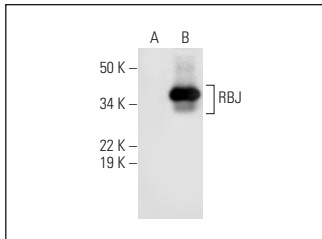
RBJ (E-2) is recommended for detection of RBJ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RBJ siRNA (h): sc-94951, RBJ siRNA (m): sc-152722, RBJ shRNA Plasmid (h): sc-94951-SH, RBJ shRNA Plasmid (m): sc-152722-SH, RBJ shRNA (h) Lentiviral Particles: sc-94951-V and RBJ shRNA (m) Lentiviral Particles: sc-152722-V.

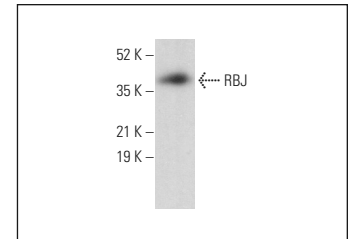
Molecular Weight of RBJ isoforms 1/2/3: 31/11/20 kDa.

Positive Controls: human RBJ transfected HEK293T whole cell lysate or rat testis extract: sc-2400.

DATA



RBJ (E-2): sc-390736. Western blot analysis of RBJ expression in non-transfected (A) and human RBJ transfected (B) HEK293T whole cell lysates.



RBJ (E-2): sc-390736. Western blot analysis of RBJ expression in rat testis tissue extract.

SELECT PRODUCT CITATIONS

1. Piette, B.L., et al. 2021. Comprehensive interactome profiling of the human Hsp70 network highlights functional differentiation of J domains. *Mol. Cell* 81: 2549-2565.e8.

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.