SANTA CRUZ BIOTECHNOLOGY, INC.

Ral GPS2 (FE-63): sc-81899

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Ral GPS2 (Ral GEF with PH domain and SH3 binding motif 2) is a 583 amino acid member of the Ral GPS family and functions as a guanine nucleotide-exchange factor (GEF) for the small GTPase Ral A. Members of the Ral GPS family of GEFs are distinct from other Ral GEFs in that they lack the Ras-GTP-binding domain and are therefore activated in a Ras-independent manner. Expressed in testis and brain, Ral GPS2 localizes to the cytoplasm and contains one Ras-GEF domain and one PH domain. Via its PH domain, Ral GPS2 can associate with the cell membrane and can bind to phosphatidylinositol 4,5-bisphosphate. In addition, Ral GPS2 interacts with GRB2 and PLC γ1 and may function in cytoskeleton organization and Ras-independent stimulation of transcription. Mutations in the gene encoding Ral GPS2 are implicated in the development of Alzheimer disease (AD).

REFERENCES

1. Rebhun, J.F., Chen, H. and Quilliam, L.A. 2000. Identification and characterization of a new family of guanine nucleotide exchange factors for the Ras-related GTPase Ral. J. Biol. Chem. 275: 13406-13410.
2. Martegani, E., Ceriani, M., Tisi, R. and Berruti, G. 2002. Cloning and characterization of a new Ral-GEF expressed in mouse testis. Ann. N.Y. Acad. Sci. 973: 135-137.
3. Quilliam, L.A., Rebhun, J.F. and Castro, A.F. 2002. A growing family of guanine nucleotide exchange factors is responsible for activation of Ras-family GTPases. Prog. Nucleic Acid Res. Mol. Biol. 71: 391-444.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611154. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hayes, M.G., Pluzhnikov, A., Miyake, K., Sun, Y., Ng, M.C., Roe, C.A., Below, J.E., Nicolae, R.I., Konkashbaev, A., Bell, G.I., Cox, N.J. and Hanis, C.L. 2007. Identification of type 2 diabetes genes in Mexican Americans through genome-wide association studies. Diabetes 56: 3033-3044.
6. Liu, F., Arias-Vásquez, A., Sleegers, K., Aulchenko, Y.S., Kayser, M., Sanchez-Juan, P., Feng, B.J., Bertoli-Avella, A.M., van Swieten, J., Axenovich, T.I., Heutink, P., van Broeckhoven, C., Oostra, B.A. and van Duijn, C.M. 2007. A genomewide screen for late-onset Alzheimer disease in a genetically isolated Dutch population. Am. J. Hum. Genet. 81: 17-31.
7. Ceriani, M., Scandiuzzi, C., Amigoni, L., Tisi, R., Berruti, G. and Martegani, E. 2007. Functional analysis of RalGPS2, a murine guanine nucleotide exchange factor for Ral A GTPase. Exp. Cell Res. 313: 2293-2307.
8. Li, J., Yu, B., Song, L., Eschrich, S. and Haura, E.B. 2007. Effects of IFN-γ and Stat1 on gene expression, growth, and survival in non-small cell lung cancer cells. J. Interferon Cytokine Res. 27: 209-220.

CHROMOSOMAL LOCATION

Genetic locus: RALGPS2 (human) mapping to 1q25.2.

SOURCE

Ral GPS2 (FE-63) is a mouse monoclonal antibody raised against recombinant Ral GPS2 of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ral GPS2 (FE-63) is recommended for detection of Ral GPS2 of 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).

Suitable for use as control antibody for Ral GPS2 siRNA (h): sc-88634, Ral GPS2 shRNA Plasmid (h): sc-88634-SH and Ral GPS2 shRNA (h) Lentiviral Particles: sc-88634-V.

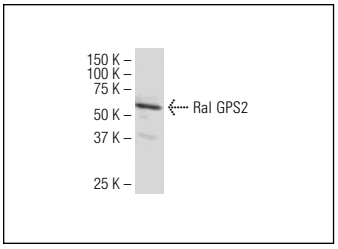
Molecular Weight of Ral GPS2: 65 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

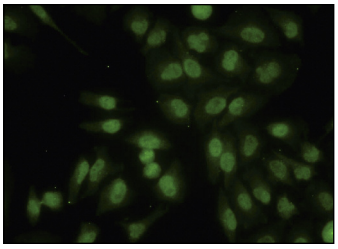
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



Ral GPS2 (FE-63): sc-81899. Western blot analysis of Ral GPS2 expression in HeLa whole cell lysate.



Ral GPS2 (FE-63): sc-81899. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

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.