SANTA CRUZ BIOTECHNOLOGY, INC.

Gads (G-11): sc-390373

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Src homology 3 (SH3) region is a small protein domain of approximately 60 amino acids present in a large group of proteins. In general, it exists in association with catalytic domains, as in the nonreceptor protein-tyrosine kinases and phospholipase C-γ, within structural proteins, such as spectrin or myosin, and in small adapter proteins, such as Crk and GRB2. SH3 domains are often accompanied by SH2 domains of 100 amino acids that bind to tyrosine-phosphorylated regions of target proteins, frequently linking activated growth factors to putative signal transduction proteins. Deletion or mutation of SH3 domains generally activates the transforming potential of nonreceptor tyrosine kinases, suggesting that SH3 mediates negative regulation of an intrinsic transforming activity. Gads is an adapter proteins that contains both SH2 and SH3 domains. Gads binds to tyrosine-phosphorylated proteins, such as Shc, and functions to couple these proteins to downstream effectors.

REFERENCES

1. Ullrich, A. and Schlessinger, J. 1990. Signal transduction by receptors with tyrosine kinase activity. Cell 61: 203-212.
2. Ellis, C., et al. 1990. Phosphorylation of GAP and GAP-associated proteins by transforming and mitogenic tyrosine kinases. Nature 343: 377-381.
3. Morrison, D.K., et al. 1990. Platelet-derived growth factor (PDGF)-dependent association of phospholipase C-γ with the PDGF receptor signaling complex. Mol. Cell. Biol. 10: 2359-2366.
4. Cantley, L.C., et al. 1991. Oncogenes and signal transduction. Cell 64: 281-302.
5. Koch, C.A., et al. 1991. SH2 and SH3 domains: elements that control interactions of cytoplasmic signaling proteins. Science 252: 669-674.
6. Ravichandran, K.S., et al. 1993. Interaction of Shc with the ζ chain of the T cell receptor upon T cell activation. Science 262: 902-905.
7. Liu, S.K. and McGlade, C.J. 1998. Gads is a novel SH2 and SH3 domain-containing adaptor protein that binds to tyrosine-phosphorylated Shc. Oncogene 17: 3073-3082.

CHROMOSOMAL LOCATION

Genetic locus: GRAP2 (human) mapping to 22q13.1.

SOURCE

Gads (G-11) is a mouse monoclonal antibody raised against amino acids 1-180 mapping at the N-terminus of Gads of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Gads (G-11) is recommended for detection of Gads of 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 Gads siRNA (h): sc-40958, Gads shRNA Plasmid (h): sc-40958-SH and Gads shRNA (h) Lentiviral Particles: sc-40958-V.

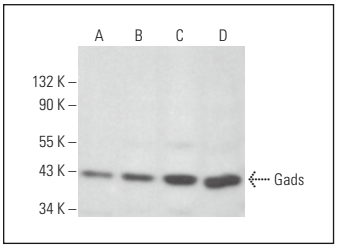
Molecular Weight of Gads: 40 kDa.

Positive Controls: Gads (h): 293T Lysate: sc-114137, ALL-SIL whole cell lysate: sc-364356 or MOLT-4 cell lysate: sc-2233.

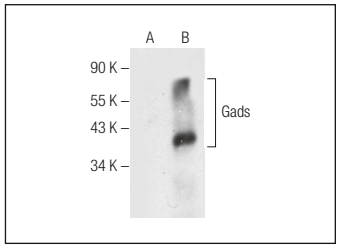
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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



Gads (G-11): sc-390373. Western blot analysis of Gads expression in MOLT-4 (**A**), ALL-SIL (**B**), SUP-T1 (**C**) and CCRF-CEM (**D**) whole cell lysates.



Gads (G-11): sc-390373. Western blot analysis of Gads expression in non-transfected: sc-117752 (**A**) and human Gads transfected: sc-114137 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, Q.L., et al. 2019. T cell receptor (TCR)-induced PLC-γ1 sumoylation via PIASxβ and PIAS3 SUMO E3 ligases regulates the microcluster assembly and physiological function of PLC-γ1. Front. Immunol. 10: 314.

RESEARCH USE

For research use only, not for use in diagnostic procedures.