SANTA CRUZ BIOTECHNOLOGY, INC.

Gab 1 (H-7): sc-133191

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Growth factor triggering of protein tyrosine kinase receptors induces signals that cascade to the nucleus, activating mitogenic as well as other responses. Critical components of this process include adapter proteins such as Shc, IRS-1 and Gab 1 (GRB-associated binder-1) that lack detectable catalytic activity. These are immediate substrates of receptor tyrosine kinase activity and serve to link activated receptors to downstream signaling components. Whereas Shc has been implicated in signaling by diverse receptor families, IRS-1 serves primarily as the major Insulin receptor substrate. Shc and Gab 1 also participate in Insulin signaling by linking the Insulin receptor to Ras by forming complexes with GRB2 (another adapter protein) and Sos independently of IRS-1. Gab 1 is also thought to be involved in the EGF receptor signaling pathway.

CHROMOSOMAL LOCATION

Genetic locus: GAB1 (human) mapping to 4q31.21; Gab1 (mouse) mapping to 8 C2.

SOURCE

Gab 1 (H-7) is a mouse monoclonal antibody raised against amino acids 119-316 of Gab 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Gab 1 (H-7) is available conjugated to agarose (sc-133191 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133191 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133191 PE), fluorescein (sc-133191 FITC), Alexa Fluor® 488 (sc-133191 AF488), Alexa Fluor® 546 (sc-133191 AF546), Alexa Fluor® 594 (sc-133191 AF594) or Alexa Fluor® 647 (sc-133191 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133191 AF680) or Alexa Fluor® 790 (sc-133191 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Gab 1 (H-7) is recommended for detection of Gab 1 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 Gab 1 siRNA (h): sc-35431, Gab 1 siRNA (m): sc-35432, Gab 1 shRNA Plasmid (h): sc-35431-SH, Gab 1 shRNA Plasmid (m): sc-35432-SH, Gab 1 shRNA (h) Lentiviral Particles: sc-35431-V and Gab 1 shRNA (m) Lentiviral Particles: sc-35432-V.

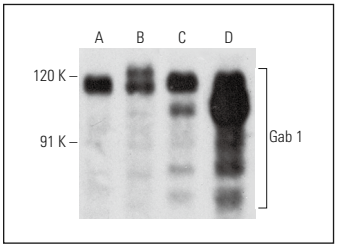
Molecular Weight of Gab 1: 110-115 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, Gab 1 (h): 293T Lysate: sc-111467 or 3T3-L1 cell lysate: sc-2243.

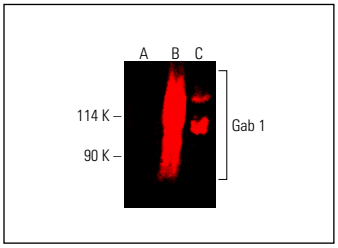
STORAGE

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

DATA



Gab 1 (H-7): sc-133191. Western blot analysis of Gab 1 expression in SH-SY5Y (**A**), HT-29 (**B**), 3T3-L1 (**C**) and RAT2 (**D**) whole cell lysates.



Gab 1 (H-7): sc-133191. Near-Infrared western blot analysis of Gab 1 expression in non-transfected 293T: sc-117752 (**A**), human Gab 1 transfected 293T: sc-111467 (**B**) and U-698-M (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 790: sc-542740.

SELECT PRODUCT CITATIONS

1. Wu, C.C., et al. 2017. mTORC1-mediated inhibition of 4EBP1 is essential for hedgehog signaling-driven translation and medulloblastoma. Dev. Cell 43: 673-688.e5.
2. Zhang, L., et al. 2019. Single-cell transcriptomics in medulloblastoma reveals tumor-initiating progenitors and oncogenic cascades during tumorigenesis and relapse. Cancer Cell 36: 302-318.e7.
3. Viaene, A.N., et al. 2021. Congenital tumors of the central nervous system: an institutional review of 64 cases with emphasis on tumors with unique histologic and molecular characteristics. Brain Pathol. 31: 45-60.
4. Wang, L.B., et al. 2021. Proteogenomic and metabolomic characterization of human glioblastoma. Cancer Cell 39: 509-528.e20.
5. Heckl, S.M., et al. 2021. Programmed death-ligand 1 (PD-L1) expression is induced by Insulin in pancreatic ductal adenocarcinoma cells pointing to its role in immune checkpoint control. Med. Sci. 9: 48.
6. Deutschmann-Olek, K.M., et al. 2021. Defining substrate selection by rhinoviral 2A proteinase through its crystal structure with the inhibitor zVAM.fmk. Virology 562: 128-141.
7. Georgescu, M.M., et al. 2022. Novel neoplasms associated with syndromic pediatric medulloblastoma: integrated pathway delineation for personalized therapy. Cell Commun. Signal. 20: 123.
8. Li, Y., et al. 2023. $G_{\alpha i1/3}$ mediate Netrin-1-CD146-activated signaling and angiogenesis. Theranostics 13: 2319-2336.
9. Xie, H., et al. 2024. $G_{\alpha i1/3}$ signaling mediates IL-5-induced eosinophil activation and type 2 inflammation in eosinophilic chronic rhinosinusitis. Front. Immunol. 15: 1460104.

RESEARCH USE

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