SANTA CRUZ BIOTECHNOLOGY, INC.

eIF2Bδ (P-6): sc-9981

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex eIF2B exists as a five subunit complex composed of eIF2Bα, eIF2Bβ, eIF2Bγ, eIF2Bδ and eIF2Bε. The eIF2B complex catalyzes the exchange of GDP for GTP on the eIF2 complex, following the interaction of eIF2/GTP with the 40S ribosomal subunit. Guanine nucleotide exchange factor (GEF) activity was exhibited by the eIF2Bε subunit alone, but it was greater in the presence of all five eIF2B subunits. Phosphorylation of eIF2 inhibits GEF activity of eIF2B, an inhibition that requires the eIF2Bα subunit.

CHROMOSOMAL LOCATION

Genetic locus: EIF2B4 (human) mapping to 2p23.3; Eif2b4 (mouse) mapping to 5 B1.

SOURCE

eIF2Bδ (P-6) is a mouse monoclonal antibody raised against full length eIF2Bδ of rat origin.

PRODUCT

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

eIF2Bδ (P-6) is available conjugated to agarose (sc-9981 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-9981 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9981 PE), fluorescein (sc-9981 FITC), Alexa Fluor® 488 (sc-9981 AF488), Alexa Fluor® 546 (sc-9981 AF546), Alexa Fluor® 594 (sc-9981 AF594) or Alexa Fluor® 647 (sc-9981 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-9981 AF680) or Alexa Fluor® 790 (sc-9981 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

RESEARCH USE

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

APPLICATIONS

eIF2Bδ (P-6) is recommended for detection of eIF2Bδ of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for eIF2Bδ siRNA (h): sc-35276, eIF2Bδ siRNA (m): sc-35277, eIF2Bδ shRNA Plasmid (h): sc-35276-SH, eIF2Bδ shRNA Plasmid (m): sc-35277-SH, eIF2Bδ shRNA (h) Lentiviral Particles: sc-35276-V and eIF2Bδ shRNA (m) Lentiviral Particles: sc-35277-V.

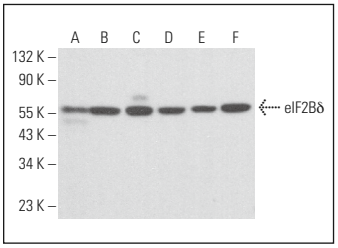
Molecular Weight of eIF2Bδ: 60 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, WEHI-231 whole cell lysate: sc-2213 or K-562 whole cell lysate: sc-2203.

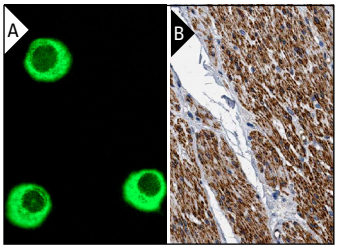
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



eIF2Bδ (P-6): sc-9981. Western blot analysis of eIF2Bδ expression in K-562 (**A**), HEL 92.1.7 (**B**), WEHI-231 (**C**), RAW 264.7 (**D**), M1 (**E**) and F9 (**F**) whole cell lysates.



eIF2Bδ (P-6): sc-9981. Immunofluorescence staining of methanol-fixed KNRK cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Balachandran, S. and Barber, G.N. 2004. Defective translational control facilitates vesicular stomatitis virus oncolysis. Cancer Cell 5: 51-65.
2. Liu, R., et al. 2011. Severity of vanishing white matter disease does not correlate with deficits in eIF2B activity or the integrity of eIF2B complexes. Hum. Mutat. 32: 1036-1045.
3. Alves, P.K.N., et al. 2023. Leucine supplementation improves diastolic function in HFpEF by HDAC4 inhibition. Cells 12: 2561.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.