

ELKS (G-10): sc-515041

BACKGROUND

The glutamine, leucine, lysine, and serine-rich protein ELKS, also designated Rab6-interacting protein 2 and CAZ-associated structural protein (CAST) or the acronym ERC, is a member of a family of RIM-binding proteins. RIMs are presynaptic active zone proteins that regulate neurotransmitter release. This class of protein functions by recruiting I κ B α to the I κ B kinase (IKK) complex, and thus serves a regulatory function for IKK activation. Five isoforms of ELKS (α , β , γ , δ , and ϵ) exist and have multiple coding region differences and distinct C-termini. Only brain-specific ELKS bind to RIMs, but both ubiquitous and brain-specific ELKS bind to Rab6, a GTP-binding protein involved in membrane traffic at the Golgi complex. Fusion of ELKS to RET due to translocation t(10;12)(q11;p13) results in a papillary thyroid carcinoma.

REFERENCES

1. Nakata, T., et al. 1999. Fusion of a novel gene, ELKS, to RET due to translocation t(10;12)(q11;p13) in a papillary thyroid carcinoma. *Genes Chromosomes Cancer* 25: 97-103.
2. Wang, Y., et al. 2002. A family of RIM-binding proteins regulated by alternative splicing: implications for the genesis of synaptic active zones. *Proc. Natl. Acad. Sci. USA* 99: 14464-14469.
3. Ko, J., et al. 2003. Interaction of the ERC fami family of multidomain proteins. *J. Biol. Chem.* 278: 42377-42385.
4. Deguchi-Tawarada, M., et al. 2004. CAST2: identification and characterization of a protein structurally related to the presynaptic cytomatrix protein CAST. *Genes Cells* 9: 15-23.

CHROMOSOMAL LOCATION

Genetic locus: ERC1 (human) mapping to 12p13.33; Erc1 (mouse) mapping to 6 F1.

SOURCE

ELKS (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 137-156 near the N-terminus of ELKS of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515041 X, 200 μ g/0.1 ml.

ELKS (G-10) is available conjugated to agarose (sc-515041 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515041 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515041 PE), fluorescein (sc-515041 FITC), Alexa Fluor[®] 488 (sc-515041 AF488), Alexa Fluor[®] 546 (sc-515041 AF546), Alexa Fluor[®] 594 (sc-515041 AF594) or Alexa Fluor[®] 647 (sc-515041 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515041 AF680) or Alexa Fluor[®] 790 (sc-515041 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515041 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ELKS (G-10) is recommended for detection of ELKS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ELKS siRNA (h): sc-60572, ELKS siRNA (m): sc-60573, ELKS shRNA Plasmid (h): sc-60572-SH, ELKS shRNA Plasmid (m): sc-60573-SH, ELKS shRNA (h) Lentiviral Particles: sc-60572-V and ELKS shRNA (m) Lentiviral Particles: sc-60573-V.

ELKS (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

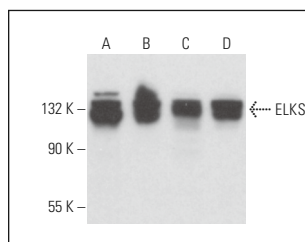
Molecular Weight of ELKS: 94 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181, SW480 cell lysate: sc-2219 or A2058 whole cell lysate: sc-364178.

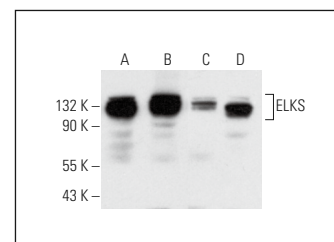
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



ELKS (G-10): sc-515041. Western blot analysis of ELKS expression in ECV304 (A), SJRH30 (B), NIH/3T3 (C) and Neuro-2A (D) whole cell lysates.



ELKS (G-10): sc-515041. Western blot analysis of ELKS expression in NTERA-2 cl.D1 (A), SW480 (B), Jurkat (C) and A2058 (D) whole cell lysates.

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.

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