

Kizuna (S-20): sc-85385

BACKGROUND

Kizuna (centrosomal protein kizuna), also known as PLK1S1 (polo-like kinase 1 substrate 1) or KIZ, is a 673 amino acid protein that belongs to the kizuna family. Kizuna, meaning "bonds" in Japanese, is important for the establishment of a strong mitotic centrosome that can withstand the forces which converge on the centrosome during spindle formation. Kizuna also aids in the stabilization of pericentriolar material around the centriole. Localizing to the centrosome, Kizuna interacts with CEP72, AKAP9, ODF2, GCP2 and PCNT throughout the cell cycle. Once the centrosome has been duplicated, Kizuna usually resides with the mother centrosome and the older centriole as well as the surrounding proteins. Kizuna is post-translationally phosphorylated at multiple sites and exists as five alternatively spliced isoforms. The gene encoding Kizuna maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

1. Prusiner, S.B. 1998. The prion diseases. *Brain Pathol.* 8: 499-513.
2. Collins, S., McLean, C.A. and Masters, C.L. 2001. Gerstmann-Sträussler-Scheinker syndrome, fatal familial insomnia and kuru: a review of these less common human transmissible spongiform encephalopathies. *J. Clin. Neurosci.* 8: 387-397.
3. Masullo, C. and Macchi, G. 2001. Does PRNP gene control the clinical and pathological phenotype of human spongiform transmissible encephalopathies? *Clin. Neuropathol.* 20: 19-25.
4. Joó, J.G., Beke, A., Tóth-Pál, E., Hargitai, B., Szigeti, Z., Papp, C. and Papp, Z. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. *J. Reprod. Med.* 51: 209-212.
5. Ville, D., Kaminska, A., Bahi-Buisson, N., Biraben, A., Plouin, P., Telvi, L., Dulac, O. and Chiron, C. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.
6. Elghezal, H., Hannachi, H., Mougou, S., Kammoun, H., Triki, C. and Saad, A. 2007. Ring chromosome 20 syndrome without deletions of the subtelomeric and CHRNA4-KCNQ2 genes loci. *Eur. J. Med. Genet.* 50: 441-445.

CHROMOSOMAL LOCATION

Genetic locus: PLK1S1 (human) mapping to 20q11.23.

SOURCE

Kizuna (S-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Kizuna of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85385 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Kizuna (S-20) is recommended for detection of Kizuna 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Kizuna (S-20) is also recommended for detection of Kizuna in additional species, including equine and porcine.

Suitable for use as control antibody for Kizuna siRNA (h): sc-72722, Kizuna shRNA Plasmid (h): sc-72722-SH and Kizuna shRNA (h) Lentiviral Particles: sc-72722-V.

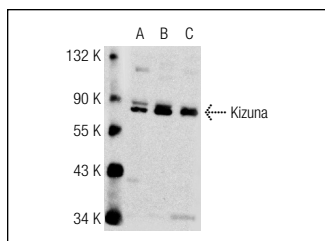
Molecular Weight of Kizuna isoforms: 75/73/70/63/59 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, KNRK whole cell lysate: sc-2214 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Kizuna (S-20): sc-85385. Western blot analysis of Kizuna expression in NIH/3T3 (A), Jurkat (B) and KNRK (C) 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.