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# PJA2 siRNA (m): sc-152284

## BACKGROUND

PJA2 (praja ring finger 2), also known as E3 ubiquitin-protein ligase praja-2, RNF131 (ring finger protein 131) or Neurodap1, is a 708 amino acid protein that contains one ring-type zinc finger and exists as 2 alternatively spliced isoforms. Significantly conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, PJA2 shares 52% identity with PJA1, which is involved in protein ubiquitination in brain and may play a role in X-linked mental retardation. Encoded by a gene that maps to human chromosome 5q21.3, PJA2 localizes to both endoplasmic reticulum and Golgi apparatus membranes. Participating in E2-dependent, E3 ubiquitin-protein ligase activity, PJA2 binds to a variety of E2s and interacts with ubiquitin-conjugating enzymes, such as UBE2D2, *in vitro*.

## REFERENCES

- Mishra, L., et al. 1997. Praja1, a novel gene encoding a RING-H2 motif in mouse development. *Oncogene* 15: 2361-2368.
- Yu, P., et al. 2002. PJA1, encoding a RING-H2 finger ubiquitin ligase, is a novel human X chromosome gene abundantly expressed in brain. *Genomics* 79: 869-874.
- Sasaki, A., et al. 2002. A RING finger protein Praja1 regulates Dlx5-dependent transcription through its ubiquitin ligase activity for the Dlx/Msx-interacting MAGE/Necdin family protein, Dlxin-1. *J. Biol. Chem.* 277: 22541-22546.
- Kleivi, K., et al. 2005. TP53 mutations are associated with a particular pattern of genomic imbalances in breast carcinomas. *J. Pathol.* 207: 14-19.
- Haddad, M.R., et al. 2009. Characterization of a *de novo* balanced translocation in a patient with moderate mental retardation and dysmorphic features. *Eur. J. Med. Genet.* 52: 211-217.
- Dougherty, M.K., et al. 2009. KSR2 is a calcineurin substrate that promotes ERK cascade activation in response to calcium signals. *Mol. Cell* 34: 652-662.
- Lee, K.H., et al. 2009. Gene expression profiling of rat cerebral cortex development using cDNA microarrays. *Neurochem. Res.* 34: 1030-1038.

## CHROMOSOMAL LOCATION

Genetic locus: Pja2 (mouse) mapping to 17 E1.1.

## PRODUCT

PJA2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PJA2 shRNA Plasmid (m): sc-152284-SH and PJA2 shRNA (m) Lentiviral Particles: sc-152284-V as alternate gene silencing products.

For independent verification of PJA2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-152284A, sc-152284B and sc-152284C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

PJA2 siRNA (m) is recommended for the inhibition of PJA2 expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

PJA2 (H-4): sc-390137 is recommended as a control antibody for monitoring of PJA2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PJA2 gene expression knockdown using RT-PCR Primer: PJA2 (m)-PR: sc-152284-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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