

Supplemental Methods

Virus strains. PRV 614 is PRV Bartha with gG replaced with RFP [1], PRV 158 PRV 158 contains the unique long (UL) region of Bartha and the unique short (US) region of Becker [2], PRV BaBe is Becker containing the US deletion of Bartha [3], PRV 43/25 aB4 is Bartha with the wild-type PRV Kaplan sequence restoring BamHI fragment 4 and the US region [4], PRV 327 is PRV 43/25 aB4 with the US deletion of Bartha reintroduced, and gG replaced with GFP [3,5].

Supplementary References

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2. Lyman MG, Demmin GL, Banfield BW (2003) The attenuated pseudorabies virus strain Bartha fails to package the tegument proteins Us3 and VP22. *J Virol* 77: 1403-1414.
3. Card JP, Whealy ME, Robbins AK, Enquist LW (1992) Pseudorabies virus envelope glycoprotein gI influences both neurotropism and virulence during infection of the rat visual system. *J Virol* 66: 3032-3041.
4. Lomniczi B, Watanabe S, Ben-Porat T, Kaplan AS (1984) Genetic basis of the neurovirulence of pseudorabies virus. *J Virol* 52: 198-205.
5. Curanovic D, Lyman MG, Bou-Abboud C, Card JP, Enquist LW (2009) Repair of the UL21 locus in pseudorabies virus Bartha enhances the kinetics of retrograde, transneuronal infection in vitro and in vivo. *J Virol* 83: 1173-1183.