Anti-ICP34.5 (Infected cell protein 34.5) Polyclonal Antibody

Category: Polyclonal Antibody

Catalog #: AB2H302

Antigen Synonym: RL1, Neurovirulence factor ICP34.5, protein gamma(1)34.5

Species Reactivity: Human herpesvirus 2 strain HG52

Immunogen/Specificity:
Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to near N-terminal residues of Human herpesvirus 2 ICP34.5 (Infected cell protein 34.5)

Description: ICP34.5 (Infected cell protein 34.5) contributes to HSV resistance to the antiviral effects of alpha/beta interferon. ICP34.5 (Infected cell protein 34.5) recruits the serine/threonine-protein phosphatase PPP1CA/PP1-alpha to dephosphorylate the translation initiation factor eIF-2A, thereby couteracting the host shutoff of protein synthesis involving double-stranded RNA-dependent protein kinase EIF2AK2/PKR. ICP34.5 also downmodulates the host MHC class II proteins cell surface expression. ICP34.5 acts as a neurovirulence factor that has a profound effect on the growth of the virus in central nervous system tissue, probably through its ability to maintain an environement favorable for viral replication. ICP34.5 interacts with human PPP1CA to form a high-molecular-weight complex that dephosphorylates eIF2-alpha. ICP34.5 binds to proliferating cell nuclear antigen (PCNA), which may release host cells from growth arrest and facilitate viral replication. At early times in infection, ICP34.5 colocalizes with PCNA and replication proteins in cell nuclei, before accumulating in the cytoplasm by 8 to 12 hours post-infection. The effects on the host cell are probably mediated by de novo-synthesized ICP34.5, the virion-derived population being either non-functional or present in very low amounts.
ICP34.5 is detected as early as 3 hpi prior to viral replication but reaches maximal levels late in infection. ICP34.5 gene is therefore classified as gamma-1 or leaky late gene

Reference:
McGeoch,D.J., et al, J. Gen. Virol. 72 (PT 12), 3057-3075 (1991)
Dolan,A., et al, J. Virol. 72 (3), 2010-2021 (1998)
McGeoch,D.J., et al, J. Gen. Virol. 68 (PT 1), 19-38 (1987)
Everett,R.D. and Fenwick,M.L., J. Gen. Virol. 71 (PT 6), 1387-1390 (1990)
Barnett,B.C., et al, J. Gen. Virol. 73 (PT 8), 2167-2171 (1992)

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