

# Recombinant Full Length JCV Polyomavirus Major Capsid VP1 Protein

**Cat. No.** VP1-03J    **Lot. No.** (See product label)

## SPECIFICATION

**Product Overview**      Recombinant JCV Polyomavirus Major Capsid VP1 protein is a JC polyomavirus Full Length protein, in the 1 to 354 aa range, expressed in *Saccharomyces cerevisiae*, with >95% purity and suitable for WB, SDS-PAGE.

**Species**                      JCV

**Source**                        Yeast

**Conjugation/Label**        1-354 aa

**Description**                Forms an icosahedral capsid with a T=7 symmetry and a 40 nm diameter. The capsid is composed of 72 pentamers linked to each other by disulfide bonds and associated with VP2 or VP3 proteins. Interacts with a N-linked glycoprotein containing terminal alpha(2-6)-linked sialic acids on the cell surface to provide virion attachment to target cell. The serotonergic receptor 5HT2AR also acts as a cellular receptor for JCV on human glial cells. Once attached, the virions enter predominantly by a ligand-inducible clathrin-dependent pathway and traffic to the ER. Inside the endoplasmic reticulum, the protein folding machinery isomerizes VP1 interpentamer disulfide bonds, thereby triggering initial uncoating. Next, the virion uses the endoplasmic reticulum-associated degradation machinery to probably translocate in the cytosol before reaching the nucleus. Nuclear entry of the viral DNA involves the selective exposure and importin recognition of VP2/Vp3 nuclear localization signal. In late phase of infection, neo-synthesized VP1 encapsulates replicated genomic DNA at

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nuclear domains called promyelocytic leukemia (PML) bodies, and participates in rearranging nucleosomes around the viral DNA.

**AASequence**

```

MAPTKRKGERKDPVQVPKLLIRGGVEVLEVKTGVDSITEVECFLLTPEMGDPDEHLR
GFSKISISDTFESDSPNKDMLPCYSVARIPLPNLNEDLTGCGNLMWEAVTLKTEVLG
VTTLMNVHSNGQATHDNGAGKPVQGTSFHFFSVGGAELELQGVVFNYRTKYPDGTI
FPKNATVQSQVMNTEHKAYLDKNKAYPVECWVDPTRNENTRYFGTLTGGENVPP
VLHITNTATTVLLDEFGVGPLCKGDNLVLSAVDVCGMFTNRSQSQQWRGLSRYFKV
QLRKRRVKNPYPISFLLTDLINRRTPKVDGQPMYGMDAQIEEVRVFEGTEELPGDPD
MMRYVDRYGQLQTKML
    
```

**Purity** >95% SDS-PAGE

## GENE INFORMATION

**Gene Name** [Jvgp4 hypothetical protein \[ JC polyomavirus \]](#)

**Official Symbol** [Jvgp4](#)

**Synonyms** Jvgp4; hypothetical protein; hypothetical protein; Major capsid protein VP1; Major structural protein VP1

**Gene ID** [1489518](#)

**Protein Refseq** [NP\\_043511](#)

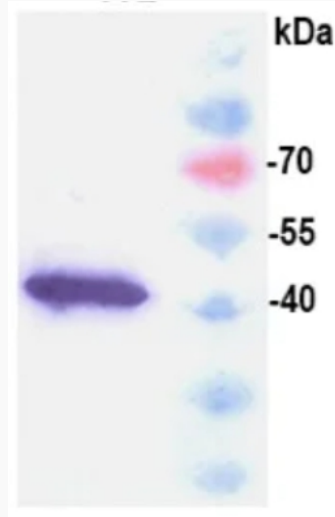
**UniProt ID** [P03089](#)

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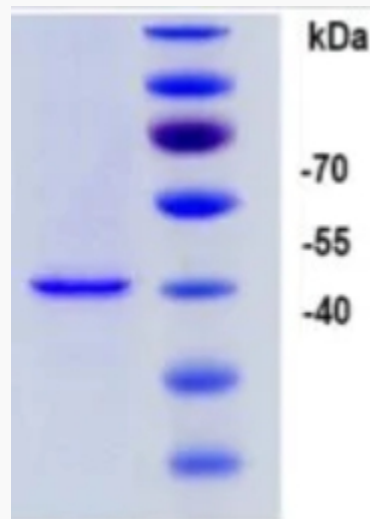
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WB



SDS-PAGE



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