# JCV (VP1) Peptide Pool

**JC polyomavirus (VP1) peptide pool for immune cell activation**

Catalog #100-1400 ~25 µg (15 nmol)/peptide

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## Product Description

JCV (VP1) Peptide Pool is a lyophilized mixture of 86 peptides from major capsid protein viral protein 1 (VP1) of JC polyomavirus (JCV). The pool consists of 15-mer peptides with 11-amino-acid overlaps that cover amino acids 1 - 354 on VP1. VP1 binds to the oligosaccharide lactoseries tetrasaccharide c (LSTc) found on host cell glycoproteins and glycolipids, and this interaction is said to be essential for JCV viral growth and infectivity (Neu et al.). The JCV VP1 (Del Valle et al.) and large T (LT) antigen (Delbue et al.) are detected in JCV-associated pathologies such as progressive multifocal leukoencephalopathy (PML) in patients with HIV. One unit of this product (i.e. ~25 µg/peptide) is sufficient for stimulating 2.5 x 10^8 cells.

APPLICATIONS

- Antigen-specific T cell stimulation
- T cell assays

## Product Information

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| Number of Peptides: | 86 |
| Source: | JC polyomavirus (also known as JCPyV) |
| Accession Number: | P03089 |
| Protein Name: | Major capsid protein VP1 |
| Protein Sequence: | MAPTKRKGERKDPVQVPKLLIRGGVEVLEVKTGVDSITEVECFLTPEMGDPDEHLRGFSKSISISDTFESDSP<br>NRDMLPCYSVARIPLPNLNEDLTCGNILMWEAVTLKTEVIGVTSLMNVHSNGQATHDNGAGKPVQGTSFHFFSVG<br>GEALELQGVLFNYRTKYPDGTIFPKNATVQSQVMNTEHKAYLDKNKAYPVECWVPDPTRNENTRYFGTLTGGENV<br>PPVLHITNTATTVLLDEFGVGPLCKGDNLYLSAVDVCGMFTNRSGSQQWRGLSRYFKVQLRKRRVKNPYPISFLLT<br>DLINRRTPRVDGQPMYGMDAQVEEVRVFEGTEELPGDPDMMRYVDKYGQLQTKML |
| Purity: | Average 70% |
| Formulation: | Lyophilized as trifluoroacetate salts |

## Preparation and Storage

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| Storage: | Store at -20°C. |
| Stability: | Stable as supplied until expiry date (EXP) on label. |
| Preparation: | Warm to room temperature (15 - 25°C) before reconstitution. Add pure dimethyl sulfoxide (DMSO; ~40 µL) and dilute with water to the desired concentration. Final concentration of DMSO must be below 1% (v/v) to avoid toxicity in the biological system. If not used immediately, aliquot and store at -20°C. Protect from light. Avoid repeated freeze-thaw cycles. |

## Related Products

For a complete list of peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com, or contact us at techsupport@stemcell.com.

## References

Del Valle L et al. (2000) Detection of HIV-1 Tat and JCV capsid protein, VP1, in AIDS brain with progressive multifocal leukoencephalopathy. J Neurovirol 6(3): 221–8.

Delbue S et al. (2008) Presence and expression of JCV early gene large T Antigen in the brains of immunocompromised and immunocompetent individuals. J Med Virol 80(12): 2147–52.

Neu U et al. (2010) Structure-function analysis of the human JC polyomavirus establishes the LSTc pentasaccharide as a functional receptor motif. Cell Host Microbe 8(4): 309–19.