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Nuclear localization signal regulates Porcine Circovirus type 2

Capsid protein nuclear export through phosphorylation

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Highlightgs

- Nuclear export of PCV2 Cap protein is characterized.
- NLS mediates nuclear export of PCV2 Cap protein.
- Phosphorylation of NLS regulates PCV2 Cap protein nuclear export.

Abstract:

The open reading frame 2 (ORF2) of porcine circovirus type 2 (PCV2) encodes the major Capsid (Cap) protein, which self-assembles into virus-like particle (VLP) of similar morphology to the PCV2 virion and accumulates in the nucleus through the N-terminal arginine-rich nuclear localization signal (NLS). In this study, PCV2 Cap protein and its derivatives were expressed via the baculovirus expression system, and the cellular localization of the recombinant proteins were investigated using anti-Cap mAb by imaging flow cytometry. Analysis of subcellular localization of Cap protein

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