



# Mouse Kidney Parvovirus (MKPV)

**A newly discovered, novel parvovirus genetically divergent from MVM and MPV that causes clinical disease in immunocompromised mice. Testing of thousands of client submitted samples indicate a prevalence of 5.8%.**

- MKPV infects both immunocompetent and immunodeficient mice causing inclusions in the renal tubular epithelium
- Virus had been identified in both wild and laboratory mice
- The virus is genetically divergent from other known mouse parvoviruses such as MVM and MPV
- In severely immunodeficient mice MKPV causes an inclusion body nephropathy and in middle-aged mice this leads to
  - Chronic renal disease
  - Elevated BUN and creatinine
  - Weight loss
  - Death
- Transmitted to naïve mice by co-housing or dirty bedding transfer
- Mice of multiple genetic lineages tested positive, including outbred stocks, inbred strains, and immunocompromised mice

## **IDEXX BioAnalytics has developed PCR-based, MKPV assay for detection.**

All Murine chapparvovirus sequences were included in developing the assay.

- The IDEXX BioAnalytics MKPV real-time PCR assay was designed to a target that is 100% conserved among the Murine chappavovirus sequences obtained from both wild and research mice in the NCBI database
- MKPV PCR assay amplified virus in the feces and tissues from wild mice, pet store mice, immunocompetent and immunocompromised research mice
- Sequence analysis was performed on virus from wild mice and research mice from 20 institutions throughout the world and revealed multiple MKPV virus strains
- MKPV has been added to the mouse Global Radil Advantage and Global Opti-Xpress/EDx panels
- New Mouse Parvovirus Plus PCR profile includes MKPV
- MKPV can be added to any other profile per customer request or ordered as a stand-alone PCR test
- A serologic assay for MKPV detection is under development

## **For More Information**

**Contact your local Account Manager or Client Support Services, 1-800-669-0825, [idxxbioanalytics@idexx.com](mailto:idxxbioanalytics@idexx.com), [idxxbioanalytics.com/MKPV](https://www.idexx.com/MKPV)**

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