



Mouse Kidney Parvovirus (MKPV)

A newly discovered, novel parvovirus genetically divergent from MVM and MPV that causes clinical disease in immunocompromised mice. Testing of random samples indicates a prevalence of over 15%.

- Infects both immunocompetent and immunodeficient mice causing inclusions in the renal tubular epithelium
- In severely immunodeficient mice
 - MKPV causes an inclusion body nephropathy
 - In middle aged mice, this infection leads to:
 - Chronic renal disease
 - Elevated BUN and creatinine
 - Weight loss
 - Death
- Transmitted to naïve mice by cohousing or dirty bedding transfer
- In random sampling of feces from immunodeficient and immunocompetent mice we found 15.5 % of samples positive.
- 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.

- Sample types for PCR detection:
 - Feces from the cage
 - Urine
 - Serum
 - Kidney
- 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, idxxbioanalytics.com/MKPV

Reference: Roediger et al., 2018 Cell 175, 1-14
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