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MilliporeSigma Launches Viresolve® Pro Shield H for More Robust, Economical Parvovirus Removal

- **Removes protein aggregates and other impurities in high pH and high conductivity mAb feed streams**
- **Significantly increases capacity of the Viresolve® Pro Device, reducing filter area and cost**

Billerica, Massachusetts, September 26, 2016 — [MilliporeSigma](#) today launched the [Viresolve® Pro Shield H](#) for removal of parvoviruses from therapeutic protein feed streams. The new Viresolve® Pro Shield H is designed for use as a prefilter with Viresolve® Pro Devices for more robust, cost-economic viral clearance.

Viresolve® Pro Shield H removes protein aggregates and impurities that foul virus filters in high pH and high conductivity monoclonal antibody (mAb) feed streams. Combined with Viresolve® Pro Device parvovirus retentive filters, the Viresolve® Pro Shield H significantly increases processing capacity, while preserving high virus removal and high flux.

“As feed stream characteristics continue to change, filtration products must evolve in order to enable successful viral clearance to ensure drug safety,” said Andrew Bulpin, Head of Process Solutions Strategic Marketing & Innovation at MilliporeSigma. “Viresolve® Pro Shield H effectively improves aggregate removal and reduces the required virus filtration area needed to process feed streams, while delivering the same high level of virus clearance our customers rely on.”

Recombinant protein, mAb, fusion protein and antibody fragment feed streams can be challenging to process efficiently, both in terms of time and cost, because these



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proteins tend to aggregate during production. Aggregates can cause virus filters to foul more rapidly, reducing the amount of feed that can be processed and increasing the number of filters required to process the same volume.

Combining the Viresolve® Pro Shield H with the Viresolve® Pro Device provides biopharmaceutical manufacturers with the highest levels of retention assurance and productivity across a broad range of feed stream characteristics. The result is an optimized virus filtration process with lower filter costs, faster processing times and less sensitivity to feed stream variability. Flexible and highly effective, the Viresolve® Pro Shield H and Viresolve® Pro Device is a comprehensive solution to the challenges of diverse viral clearance needs.

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About the Life Science Business of Merck KGaA, Darmstadt, Germany

The life science business of Merck KGaA, Darmstadt, Germany, which operates as MilliporeSigma in the U.S. and Canada, has 19,000 employees and 65 manufacturing sites worldwide, with a portfolio of more than 300,000 products enabling scientific discovery. Udit Batra is the global chief executive officer of MilliporeSigma.

Merck KGaA, Darmstadt, Germany completed its \$17 billion acquisition of Sigma-Aldrich in November 2015, creating a leader in the \$125 billion global life science industry.

Merck KGaA of Darmstadt, Germany is a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials. The company has six businesses – Biopharmaceuticals, Consumer Health, Allergopharma, Biosimilars, Life Science and Performance Materials – and generated sales of €12.85 billion in 2015. Around 50,000 employees work in 66 countries to improve the quality of life for patients, to foster the success of customers and to help meet global challenges.

Merck KGaA, Darmstadt, Germany is the world's oldest pharmaceutical and chemical company – since 1668, the company has stood for innovation, business success and responsible entrepreneurship. Holding an approximately 70 percent interest, the founding family remains the majority owner of the company to this day. Merck KGaA, Darmstadt, Germany holds the global rights to the name and the trademark "Merck" internationally except for the United States and Canada, where the company operates as EMD Serono, MilliporeSigma and EMD Performance Materials.