

September 20, 2017

## **MilliporeSigma Introduces Eshmuno® P Anti-A and Anti-B Chromatography Resins for Enhancement of Plasma-Derived Immunoglobulin**

- **Increased safety for patients undergoing immunoglobulin treatment**
- **Excellent stability for longer product lifetime**
- **Higher quality control with improved product release test**

Billerica, Massachusetts, September 20, 2017 – MilliporeSigma today launched [Eshmuno® P anti-A and Eshmuno® P anti-B](#) affinity chromatography resins specifically designed to remove anti-A and anti-B isoagglutinin antibodies during the manufacturing of plasma-derived immunoglobulin (Ig) therapies.

Trace amounts of anti-A and anti-B antibodies in plasma-derived Ig can lead to serious and sometimes fatal hemolytic events in patients undergoing plasma-based treatment. Introduction of chromatographic steps using Eshmuno® P resins to specifically deplete anti-A and anti-B antibodies is expected to reduce patient risk for adverse medical events associated with plasma-derived Ig therapies. This enhanced patient safety is achieved without negatively impacting process economics by reusing the resins for at least 200 cycles, with acid or alkaline cleaning, without loss of performance.

Eshmuno® P anti-A and Eshmuno® P anti-B resins are manufactured using a combination of MilliporeSigma's proprietary base matrix technology and a novel synthetic approach. The resins are released by an innovative test method to evaluate performance with significantly less variability compared with classical agglutination methods.



## News Release

MilliporeSigma has the right to grant non-exclusive sublicenses to certain patents and patent applications owned and controlled by LFB (Laboratoire français du Fractionnement et des Biotechnologies S.A.), strictly limited to the use of Eshmuno<sup>®</sup> P Anti-A and/or Eshmuno<sup>®</sup> P Anti-B resins for research, development and manufacture of plasma products (including toll and contract manufacturing for third parties). Customers who would like to purchase Eshmuno<sup>®</sup> P anti-A and/or Eshmuno<sup>®</sup> P anti-B resins from MilliporeSigma will be provided further details regarding the availability of the foregoing sublicense.

MilliporeSigma's range of Eshmuno<sup>®</sup> and Fractogel<sup>®</sup> EMD chromatography resins are designed for efficient bioprocessing purification and are extensively used in commercial processes. These resins are well suited to support plasma purification processes, while minimizing operational costs and time to clinic.

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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 20,000 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, 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 €15 billion in 2016. 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. The company 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.

**News Release**