Antibody Drug Conjugates


The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.
Advanced ADC Solutions

The development journey of an Antibody Drug Conjugate (ADC) is complex and remarkably challenging: it requires linking a unique, tumor targeted monoclonal antibody (mAb) to a potent, cell killing cytotoxic small molecule drug. This requires expertise in small and large molecule development, manufacturing, formulation and testing. Choosing an experienced partner, with these skills and the required containment facilities can help advance your ADC to market. Whether you are seeking to build your process based on our tailored technology platforms, a service provider – or a combination of both, we can collaborate with you.

Our ADC Services – integrated from gene sequence to liquid bulk

Complex supply chains with multiple vendors can impede clinical development, lengthening timelines. We offer a seamless supply chain from gene sequence to stability testing of final drug product that minimizes development and manufacturing complexity, reducing time to market. Our team offers:

• Development and manufacturing of monoclonal antibodies, high potency payload molecules, linkers and conjugation services.

• More than 30 years of expertise in process development of more than 220 biologics and in conjugation of more than 35 different constructs.

• Passionate teams with comprehensive experience and a track record of successful execution of customer projects.

Our ADC product offering – Take advantage of our dedicated technological innovations

ADCs are challenging molecules requiring advanced manufacturing suites and dedicated equipment to characterize the molecule and demonstrate its purity, homogeneity and stability. Optimized and robust purification steps using chromatography (hydrophobic interaction or ion exchange) or tangential flow filtration (TFF) are essential to remove process related contamination as well as residuals of linkers and cytotoxic agent, and to concentrate the active pharmaceutical ingredient (API) and stabilize the final bulk substance. ADCs also require an extended containment strategy to protect operators while avoiding the bulk product and the environment from any contamination. We offer a comprehensive portfolio of products from Cell Culture Media to TFF, from buffers to stabilizers to fit your ADC manufacturing needs.

Rely on our expertise to develop the right process, the right systems and the right solutions to empower your ADC to success.

More information

Products, services and expertise for your ADC process:
EMDMillipore.com/buildyourprocess
Conjugation or Linker/Payload Contract Manufacturing services:
SigmaAldrich.com/adc

No guide will replace the need to conduct process development and optimization experiments. The unique nature of every process stream combined with application and regulatory requirements play a part in determining the optimum process solutions. Use this selection guide as a starting point for selecting and sizing the most appropriate MilliporeSigma’s solutions.
We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

The holder of the manufacturing authorization shall ensure that the excipients are suitable for use in medicinal products by ascertaining the appropriate good manufacturing practice.

This is particularly true if the material in a certain application is regarded as high risk excipient, for example in parenteral dosage forms.