
Routine Small-Scale ADC Synthesis

Main SKU Number: **RS0001**



Service Description

This routine synthesis is for small scale preparation of purified and characterized ADC with customer's antibody at CellMosaic®.

Customers provide their antibody to CellMosaic® and CellMosaic® will supply the conjugate along with analysis data. For routine 30-200 mg scale ADC preparation for *in vivo* studies, please [click here](#). For over 200 mg large scale ADC preparation, [contact us for a quote](#).

Customers can order this online by choosing from various reaction scales, drug linkers, and other additional services.

Delivery: aliquoted product plus a COA with HIC HPLC (if selected) and SEC HPLC data, MALDI-TOF MS data (if selected), ADC concentration, and DAR value if available.

Included in the base price:

- Labor and materials (excluding antibodies).
- Initial QC and quantitation of the starting antibody by SEC HPLC.
- In-process reaction monitoring.
- Final ADC analysis by SEC HPLC to check the purity and aggregation profile and determination of the concentration.
- DAR estimation based on UV analysis. *
- ADC formulation with CellMosaic's ADC stabilizer.
- Sterilized buffers and plasticwares are used for preparation.
- Aliquot equally up to 5 tubes (equal volume per tube).

*Note: Mc-MMAF does not have a characteristic UV absorbance that allows calculation of DAR by UV.

Selections and Add-Ons:

1. **Reaction Scale:** choose between 3 mg, 5 mg, and 10 mg antibody labeling scale. Final ADC recovery is usually 40-80% depending on the properties of the ADC. If you do not see the scale of the reaction, please contact us for a quote.

2. **Drug+ Linker + Chemistry:** choose from popular drugs in the market (MMAE, SN38, DM1, MMAF, Doxorubicin, Deruxtecan) with different linkers and labeling chemistry. if you do not see the drugs you are interested in, please contact us for a quote.
3. **Optional HIC HPLC:** Hydrophobic Interaction Chromatography (HIC) HPLC is used for analyzing ADCs and checking their heterogeneity based on their hydrophobicity. For ADCs prepared via reduced thiol chemistry, HIC can be used to further calculate the DAR if the conjugate peaks are separable. Two samples are required for this analysis (antibody and ADC). [Click here for more information.](#)
4. **Optional MALDI-TOF MS:** this MALDI-TOF MS is used for analyzing intact ADC of MW up to 200KDa. Two samples are required (antibody and ADC). The data can be used to calculate DAR. [Click here for more information.](#) Note: Some ADCs may not be ionized well resulting in inferior quality MS data. Drugs conjugated with some releasable linkers may fall off during ionization resulting in artificially low DAR data.
5. **Aliquot:** additional aliquot beyond 5 tubes with same volume will be charged at \$15 per tube. Special request for the exact amount aliquot would be charged at \$50 per tube.
6. **Formulation:** final product will be supplied in CellMosaic's ADC PBS stabilizing buffer (1x) either as a solution or lyophilized powder. **For ADC with SN38, DM1, and Doxorubicin, lyophilization is required.**
7. **Optional 0.2um Sterile Filtration:** the routine ADC preparation at CellMosaic uses sterilized buffers, pyrogen free pipette tips and tubes. The final purified product is adequate for in vitro and in vivo studies. However, you can still request additional 0.2um sterile filtration of the ADC after the purification. This process may decrease the total ADC supplied to you.

Antibody Requirements:

- **IgG Type:** full length IgG (MW of 150KDa), IgM, F(ab')₂ (MW of 110KDa). If you have other single variant antibody fragments, please go to the routine protein drug conjugate synthesis instead,
- **Purity:** preferably >90% pure by gel electrophoresis with minimum aggregation (note: antibody quality will not prevent us from preparing ADC. However, the quality of the ADC will be affected).
- **Amount:** minimum amount of antibody supplied should be few hundred micrograms more than the asking reaction scale (protein content measured by UV). We will need ~50 to 300 microgram antibody for initial QC and other analysis if selected. Note, only 1x material requested. If we have to repeat the reaction, the customer is responsible for more antibody.

Supply Antibody Information: Fill out as much information about your antibody as you can. We specifically request information such as amount supplied, MW, IgG type etc. Attach any QC document of the antibody if available.

Special Request for Higher DAR:

Standard synthesis will target average 4 drugs per antibody molecule and can be ranged from 3 to 5 drugs per antibody molecule. Higher DAR may be requested later for Deruxtecan ADC with classical linker if your initial synthesized ADC does not have too much aggregation and precipitation.

For other drugs, higher loading can be requested with our proprietary [super-hydrophilic sugar alcohol based AqT™ linker](#). Please contact us for a quote. Loading up to 6-8 drugs per antibody while still maintaining good solubility and biocompatibility are possible with AqT™ linkers. [Click here](#) to see an example of AqT™ ADC with 6.1 SN38.

List of the RS0001 Family Products:

Product Code/SKU	Product Name	Default Price
RS0001-MMAE-R-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAE (releasable VC-PAB + reduced thiol)	\$3,320
RS0001-MMAE-R-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAE (releasable VC-PAB + reduced thiol)	\$3,950
RS0001-MMAE-R-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAE (releasable VC-PAB + reduced thiol)	\$7,130
RS0001-SN38-R-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=SN38 (releasable ester + surface amine) Require Lyophilization	\$3,320
RS0001-SN38-R-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=SN38 (releasable ester + surface amine) Require Lyophilization	\$3,950
RS0001-SN38-R-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=SN38 (releasable ester + surface amine) Require Lyophilization	\$7,130
RS0001-DM1-S-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=DM1 (stable thiol ether + surface amine) Require Lyophilization	\$3,320
RS0001-DM1-S-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=DM1 (stable thiol ether + surface amine) Require Lyophilization	\$3,950
RS0001-DM1-S-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=DM1 (stable thiol ether + surface amine) Require Lyophilization	\$7,130
RS0001-DOX-S-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=Doxorubicin (stable amide + surface amine) Require Lyophilization	\$3,320
RS0001-DOX-S-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=Doxorubicin (stable amide + surface amine) Require Lyophilization	\$3,950
RS0001-DOX-S-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=Doxorubicin (stable amide + surface amine) Require Lyophilization	\$7,130
RS0001-MMAF-S-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAF (stable thiol ether + reduced thiol)	\$3,550
RS0001-MMAF-S-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAF (stable thiol ether + reduced thiol)	\$4,180
RS0001-MMAF-S-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAF (stable thiol ether + reduced thiol)	\$7,410
RS0001-MMAF-R-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAF (releasable VC-PAB + reduced thiol)	\$3,550
RS0001-MMAF-R-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAF (releasable VC-PAB + reduced thiol)	\$4,180
RS0001-MMAF-R-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=MMAF (releasable VC-PAB + reduced thiol)	\$7,410
RS0001-DXd-R-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=Deruxtecan (releasable GGFG + reduced thiol)	\$3,550
RS0001-DXd-R-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=Deruxtecan (releasable GGFG + reduced thiol)	\$4,180
RS0001-DXd-S-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=Deruxtecan (releasable GGFG + reduced thiol)	\$7,410
RS0001-DOX-R-3MG	[S]1. Reaction Scale=3 mg of Antibody,[S]2. Drug + Linker + Chemistry=Doxorubicin (releasable oxime + surface amine) Require Lyophilization	\$3,820
RS0001-DOX-R-5MG	[S]1. Reaction Scale=5 mg of Antibody,[S]2. Drug + Linker + Chemistry=Doxorubicin (releasable oxime + surface amine) Require Lyophilization	\$4,450
RS0001-DOX-R-10MG	[S]1. Reaction Scale=10 mg of Antibody,[S]2. Drug + Linker + Chemistry=Doxorubicin (releasable oxime + surface amine) Require Lyophilization	\$7,630
Optional	[S]3. Optional HIC HPLC=Yes (+\$200), require analysis of both antibody and ADC samples	[ADD]200
	[S]4. Optional MALDI-TOF MS=Yes (+\$600), require antibody and ADC two samples	[ADD]600
	[S]6. Lyophilization=Yes (+\$300) Required for SN38, DM1, Dox	[ADD]300
	[S]7. Optional 0.2um Sterile Filtration=Yes (+\$150) (Required for SN38, DM1, and Doxorubicin)	[ADD]150