

CellMosaic Catalog

Antibody Drug Conjugation Kits and Related Products

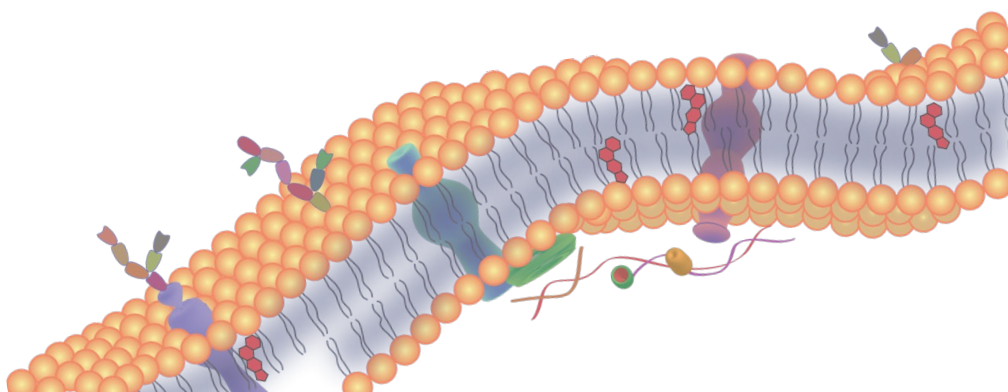
CellMosaic, Inc.

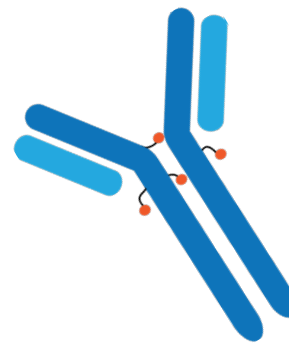
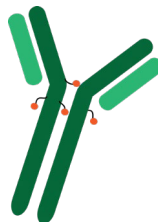
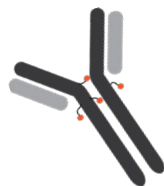
10-A Roessler Road, Woburn, MA 01801, USA

Phone: 1-781-463-0002, Fax: 1-781-998-4694

E-mail: info@cellmosaic.com

www.cellmosaic.com





Antibody Drug Conjugation Kits

ADC kits

CellMosaic provides ADC kits with options of different drugs and conjugation chemistry.

Make and purify ADC yourself, within hours

Using easy-to-follow instructions and the ADC kit, you can make and purify ADCs in your lab within hours. Why wait weeks for a custom synthesis?

Cost-effective

You can make mg quantities of ADC affordably.

Have full control

You know your antibody best, its stability, and how to handle it. So, keep it in your laboratory's quality environment while making ADCs.

Customer validated

Since launching in 2018, our ADC kits have been used successfully by many labs worldwide.



- CellMosaic ADC kits are available to prepare conjugates via surface amines or reduced thiols on antibodies for early stage screening of your antibodies and drugs.
- ADC kits are complete with all reagents and procedures for attaching the select drugs to your antibody. **All you need is your antibody** and standard lab equipment.
- ADC kits are designed with a purification method that guarantees an ADC with >90% purity within hours.
- Some of the ADC kits allow in-process optimization of the DAR of any IgG type with thiol reducing chemistry.
- All ADC kits are flexible in the reaction scale between 1-3 mg and provide same ADC quality and recovery regardless of the scale.

A typical CellMosaic personalized ADC kit (PerKits™) starts with 1 to 3 mg of customer supplied antibody and results in purified ADCs (40-60% yield) with an average DAR of 2-4.

Purities are typically >90% for conjugates free of or with less than 5% of unreacted drug. Individual results can vary depending on the specific antibody used and the hydrophobicity of the drug.

Kit instructions are complete, easy to follow, and can typically be carried out within 6 hours (with less than 1 hour of hands-on time).

Additional Support & Services

CellMosaic can analyze your ADC should you need assistance determining DAR and purity by HPLC.

Determination of the DAR and molecular weight of your conjugate using MS technique.

Customization of a kit for antibody lower than 1 mg.

Custom conjugation service at CellMosaic using the kit material.

Perkit™ ADC Selection Guide

PRODUCT#	PROTEIN	DRUG	SCALE OF REACTION (STANDARD KIT)	LABELING CHEMISTRY	LINKAGE
CM11429	IgG Ab	No drug (VC-PAB linker only)	1-3 mg	Reduced thiol	Releasable
CM51403	IgG Ab	Acid	1-3 mg	Surface amine	Stable
CM11410 (x1, x3)	IgG Ab	DM1	0.1 mg, 1-3 mg	Surface amine	Stable
CM11406 (x1, x3)	IgG Ab	Doxorubicin	1-3 mg	Surface amine	Stable
CM11407 (x1, x3)	IgG Ab	Methotrexate	1-3 mg	Surface amine	Stable
CM11409 (x1, x3)	IgG Ab	MMAE	0.1 mg, 1-3 mg, 30 mg	Reduced thiol	Releasable
CM11422 (x1, x3)	IgG Ab	MMAF	1-3 mg	Reduced thiol	Stable
CM11425 (x1, x3)	IgG Ab	MMAF	1-3 mg	Reduced thiol	Releasable
CM11408 (x1, x3)	IgG Ab	SN38	1-3 mg, 30 mg	Surface amine	Releasable
CM11431 (x1, x3)	IgG Ab	Deruxtecan	1-3 mg	Reduced thiol	Releasable
CM11416 (x1, x3)	F(ab') ₂	MMAE	0.73-2.2 mg	Reduced thiol	Releasable
CM11419 (x1, x3)	F(ab') ₂	DM1	0.73-2.2 mg	Surface amine	Stable

Selected Citations from Customers who Use ADC Prepared from CellMosaic's ADC Kits

1. Lofgren, Kristopher A.; Sreekumar, Sreeja; Jenkins, Charles E., Jr.; Erzen, Kyle J.; Kenny, Paraic A. "Anti-tumor efficacy of an MMAE-conjugated antibody targeting cell surface TACE/ADAM17-cleaved Amphiregulin in breast cancer." *Antibody Therapeutics* **2021**, *4* (4), 252-261.
2. Neetha Parameswaran, Liping Luo, Lingjun Zhang, Joel Chen, Frank P. DiFilippo, Charlie Androjna, David A. Fox, Sarah L. Ondrejka, Eric D. Hsi, Deepa Jagadeesh, Daniel J. Lindner & Feng Lin. "CD6-targeted antibody-drug conjugate as a new therapeutic agent for T cell lymphoma" *Leukemia* **2023 Aug 12**. doi: 10.1038/s41375-023-01997-8. Online ahead of print.
3. Micalizzi, Douglas S.; Che, Dante; Nicholson, Benjamin T.; Edd, Jon F.; Desai, Niyati; Lang, Evan R.; Toner, Mehmet; Maheswaran, Shyamala; Ting, David T.; Haber, Daniel A. "Targeting breast and pancreatic cancer metastasis using a dual-cadherin antibody." *PNAS* **2022**, *43* (119), e2209563119.

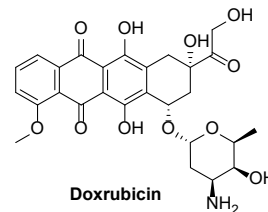
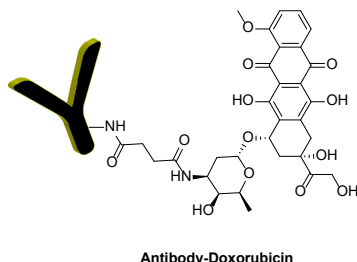


CM11406x1
CM11406x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG
Drug: doxorubicin (adriamycin)
Scale of Reactions: 1-3 mg of IgG
No. of Reactions: one or three (x3)
Labeling Sites at Ab: surface amines
ADC Linker: succinic linker
Stability of the Linkage: stable

Antibody Doxorubicin Conjugation Kit



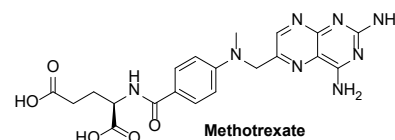
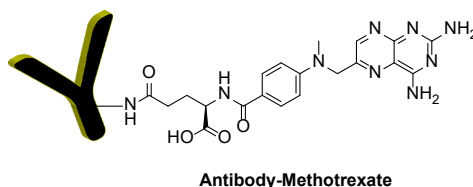
Label any IgG with doxorubicin (*N*-succinyl doxorubicin acid included in the kit)

CM11407x1
CM11407x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG
Drug: methotrexate (amethopeterin)
Scale of Reactions: 1-3 mg of IgG
No. of Reactions: one or three (x3)
Labeling Sites at Ab: surface amines
ADC Linker: direct linkage
Stability of the Linkage: stable

Antibody Methotrexate Conjugation Kit



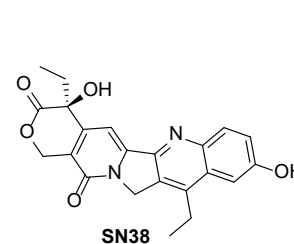
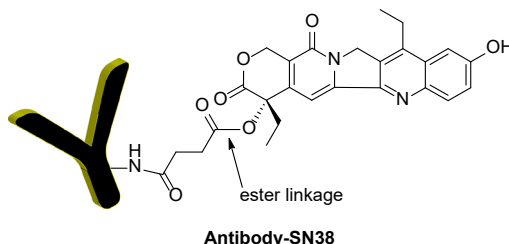
Labeling any IgG with methotrexate (methotrexate NHS ester included in the kit)

CM11408x1
CM11408x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG
Drug: SN38 (7-ethyl-10-hydroxycamptothecin)
Scale of Reactions: 1-3 mg of IgG
No. of Reactions: one or three (x3)
Labeling Sites at Ab: surface amines
ADC Linker: succinic linker
Stability of the Linkage: pH-sensitive ester bond

Antibody SN38 Conjugation Kit



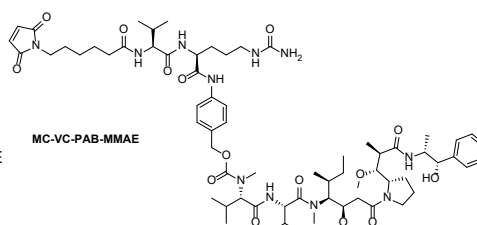
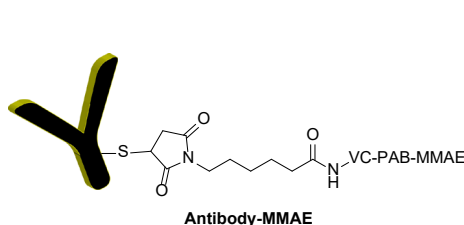
Labeling any IgG with SN38 (*O*-succinyl SN38 NHS ester included in the kit)

CM11409x1
CM11409x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG
Drug: MMAE
Scale of Reactions: 1-3 mg of IgG
No. of Reactions: one or three (x3)
Labeling Sites at Ab: reduced thiols
ADC Linker: Mal-VC-PAB linker
Stability of the Linkage: cathepsin B cleavable

Antibody MMAE Conjugation Kit (with VC-PAB Linkage)



Labeling any IgG with monomethyl auristatin E (MMAE) using a valine-citrulline p-aminobenzylcarbamate (VC-PAB) linker

SERVICES AVAILABLE

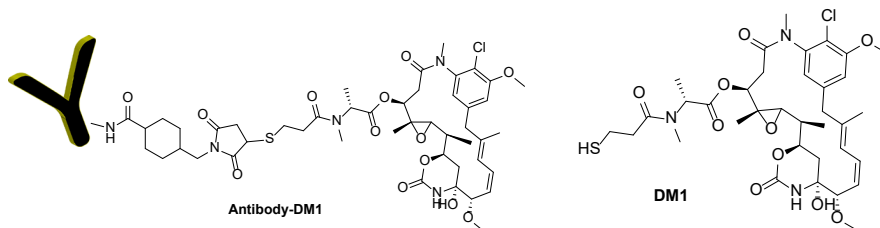
Analysis of ADC & Ab
 DAR determination & MS
 Technical Support

CM11410x1
CM11410x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG
Drug: DM1 (mertansine)
Scale of Reactions: 1-3 mg of IgG
No. of Reactions: one or three (x3)
Labeling Sites at Ab: surface amines
ADC Linker: SMCC
Stability of the Linkage: stable

Antibody Mertansine (DM1) Conjugation Kit



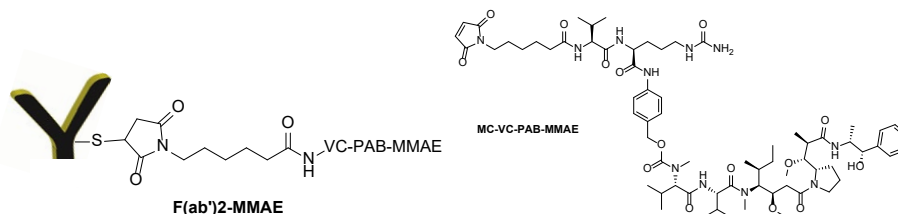
Labeling any IgG with DM1 using SMCC (succinimidyl 4-(*N*-maleimidomethyl)cyclohexane-1-carboxylate) linker

CM11416x1
CM11416x3

KIT CONFIGURATIONS

Antibody (Ab): F(ab')₂ from any IgG
Drug: MMAE
Scale of Reactions: 0.73-2.2 mg of F(ab')₂
No. of Reactions: one or three (x3)
Labeling Sites at Ab: reduced thiols
ADC Linker: Mal-VC-PAB linker
Stability of the Linkage: cathepsin B cleavable

F(ab')₂ MMAE Conjugation Kit (With VC-PAB Linkage)



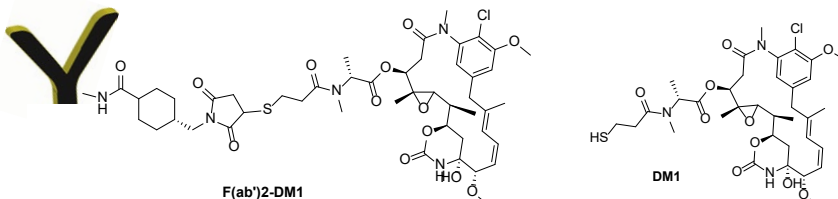
Labeling any F(ab')₂ with MMAE using a valine-citruline p-aminobenzylcarbamate (VC-PAB) linker

CM11419x1
CM11419x3

KIT CONFIGURATIONS

Antibody (Ab): F(ab')₂ from any IgG
Drug: DM1 (mertansine)
Scale of Reactions: 0.73-2.2 mg of any F(ab')₂
No. of Reactions: one or three (x3)
Labeling Sites at Ab: surface amines
ADC Linker: SMCC
Stability of the Linkage: stable

F(ab')₂ Mertansine (DM1) Conjugation Kit



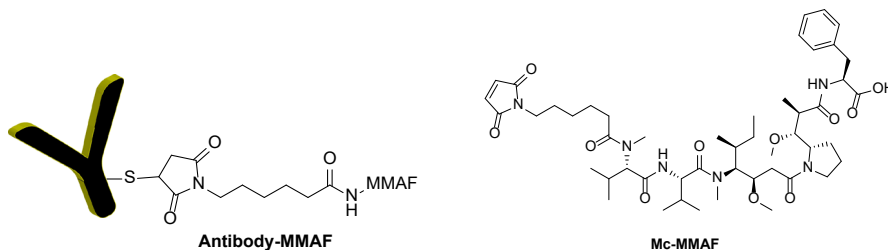
Labeling any F(ab')₂ with DM1 using SMCC (succinimidyl trans-4-(maleimidylmethyl)cyclohexane-1-carboxylate) linker

CM11422x1
CM11422x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG
Drug: MMAF
Scale of Reactions: 1-3 mg of IgG
No. of Reactions: one or three (x3)
Labeling Sites at Ab: reduced thiols
ADC Linker: maleimidocaproyl
Stability of the Linkage: stable

Antibody Mc-MMAF Conjugation Kit



Labeling any IgG with monomethyl auristatin F (MMAF) using maleimidocaproyl linker (Mc)

SERVICES AVAILABLE

Analysis of ADC & Ab
DAR determination & MS
Technical Support



CM11425x1
CM11425x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG

Drug: MMAF

Scale of Reactions: 1-3 mg of IgG

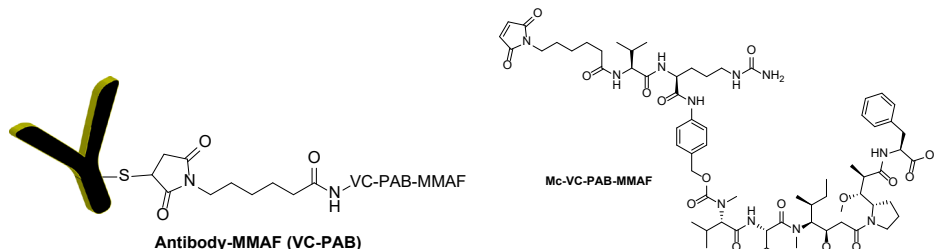
No. of Reactions: one or three (x3)

Labeling Sites at Ab: reduced thiols

ADC Linker: Mal-VC-PAB linker

Stability of the Linkage: cathepsin B cleavable

Antibody MMAF Conjugation Kit (with VC-PAB Linkage)



Labeling any IgG with monomethyl auristatin F (MMAF) using valine-citrulline p-aminobenzyl carbamate (VC-PAB)

CM11431x1
CM11431x3

KIT CONFIGURATIONS

Antibody (Ab): any IgG

Drug: Deruxtecan

Scale of Reactions: 1-3 mg of IgG

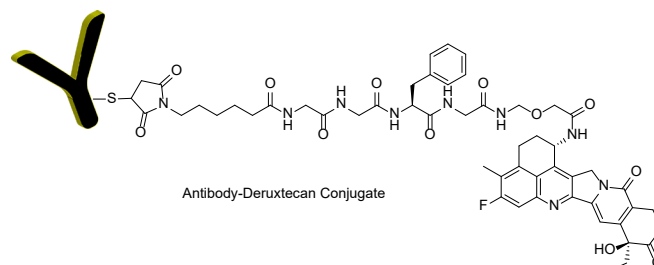
No. of Reactions: one or three (x3)

Labeling Sites at Ab: reduced thiols

ADC Linker: Mal-GGFG linker

Stability of the Linkage: enzymatically cleavable

Antibody Deruxtecan Conjugation Kit



Labeling any IgG with Deruxtecan with average 2-5 drugs.

CM51403

KIT CONFIGURATIONS

Antibody (Ab): any IgG

Drug: any carboxylic acid drug

Scale of Reactions: 1-3 mg of IgG

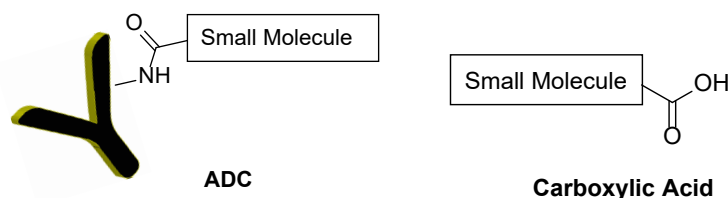
No. of Reactions: one

Labeling Sites at Ab: surface amines

ADC Linker: direct linkage

Stability of the Linkage: stable

Antibody Small Molecule Acid Conjugation Kit



Labeling any IgG with a small molecule drug containing carboxylic acid (restriction applies)

Other Drug Conjugation Kits

CM11413x1
CM11413x3

KIT CONFIGURATIONS

Protein: any protein ≥ 20 kDa

Drug: MMAE

Scale of Reactions: 6.67-20 nmol

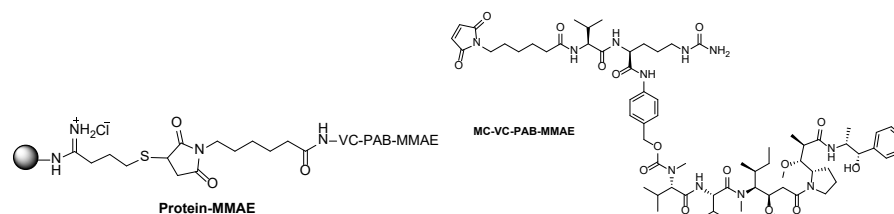
No. of Reactions: one or three (x3)

Protein Labeling Sites: surface amines

PDC Linker: Mal-VC-PAB linker

Stability of the Linkage: cathepsin B cleavable

Protein MMAE Conjugation Kit (With VC-PAB Linkage)



Labeling any protein with MMAE using a valine-citrulline p-aminobenzyl carbamate (VC-PAB) linker

SERVICES AVAILABLE

Analysis of ADC & Ab
DAR determination & MS
Technical Support



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CM11432x1
CM11432x3

KIT CONFIGURATIONS

Protein: any protein ≥ 20 KDa

Drug: MMAE

Scale of Reactions: 6.67-20 nmol

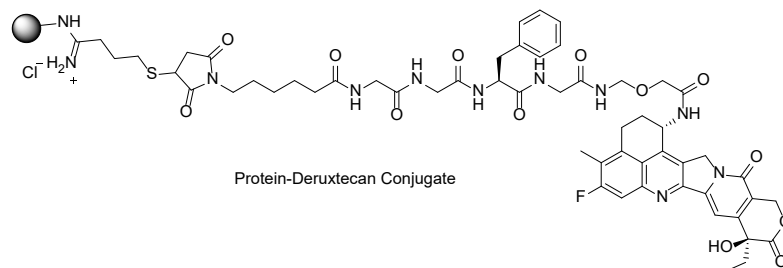
No. of Reactions: one or three (x3)

Protein Labeling Sites: reduced thiols

PDC Linker: Mal-GGFG linker

Stability of the Linkage: enzymatically cleavable

Protein Deruxtecan Conjugation Kit



Labeling any protein with Deruxtecan.

CM11430x1
CM11430x3

KIT CONFIGURATIONS

Protein: any protein ≥ 20 KDa

Drug: MMAE

Scale of Reactions: 6.67-20 nmole of protein

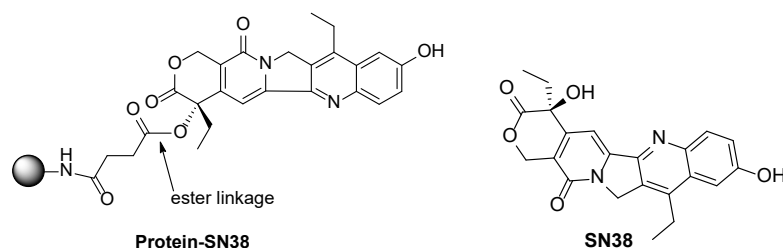
No. of Reactions: one or three (x3)

Protein Labeling Sites: surface amines

PDC Linker: succinic linker

Stability of the Linkage: pH-sensitive ester bond

Protein SN38 Conjugation Kit



Labeling any protein with SN38 (O-succinyl SN38 NHS ester included in the kit).

CM11414
CM11414x3

KIT CONFIGURATIONS

Protein: any protein ≥ 20 KDa

Drug: DM1 (mertansine)

Scale of Reactions: 6.67-20 nmole of protein

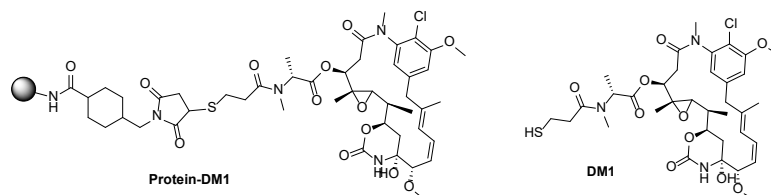
No. of Reactions: one or three (x3)

Protein Labeling Sites: surface amines

PDC Linker: SMCC

Stability of the Linkage: stable

Protein Mertansine (DM1) Conjugation Kit



Labeling any protein with DM1 using SMCC (succinimidyl trans-4-(maleimidylmethyl)cyclohexane-1-carboxylate) linker

CM52408

KIT CONFIGURATIONS

Protein: any IgG

Drug: any carboxylic acid drug

Scale of Reactions: 1-3 mg of IgG

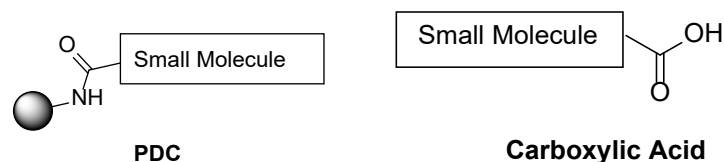
No. of Reactions: one

Protein Labeling Sites: surface amines

PDC Linker: direct linkage

Stability of the Linkage: stable

Protein Small Molecule Acid Conjugation Kit



Labeling any protein with a small molecule drug containing carboxylic acid (restrictions apply)

SERVICES AVAILABLE

Analysis of ADC & Ab
DAR determination
LC-MS (ESI)
Technical Support

Related Products

CM90005 KIT CONFIGURATIONS Number of Assays: 5 Use with CM11409(x3), CM11422(x3), CM11425(x3), CM11416(x3)	Thiol Assay Kit with Purification Kit is designed to assay the free thiol groups of a biopolymer after reducing or labeling with small molecule thiol-modification reagents. Can be used with ADC kits for optimization of drug loading.
CM90002 KIT CONFIGURATIONS Number of Assays: 10 Use with CM11410(x3), CM11419(x3), CM11414(x3)	Maleimide Assay Kit Kit is designed to assay the maleimide functional groups of a modified biopolymer, such as antibody and protein. Can be used with ADC kits to check the drug loading.
CM90005 PRODUCT CONFIGURATIONS Number of Analyses: 30 Can be used with any ADC product	Hydrophobic Interaction Chromatography (HIC) Buffer Set This high quality HIC buffer set is designed for convenient analysis of ADC and PDC following the preparation of the bioconjugates using CellMosaic's PerKit™.
CM02022 PRODUCT CONFIGURATIONS Amount: 10 mL Can be used with any ADC product	ADC Stabilizing PBS Buffer (5x) Stabilizing buffer for long-term storage of ADCs, PDCs, or any antibody/protein that has been modified with very hydrophobic small molecules. Biocompatible and will not interfere with any <i>in vitro</i> or <i>in vivo</i> studies.
CM92004 PRODUCT CONFIGURATIONS Number of Injections: 40 Can be used with any ADC product	SEC (Gel Filtration) HPLC Protein Standard (7 Components) The kit consists of six proteins and one blue dextran with a MW range of 13.7 to 2000 KDa. The broad range of protein molecular weight coverage allows easy identification of small molecules, conjugates, and aggregates in a bioconjugation mixture, such as ADC and PDC.
CM92005 PRODUCT CONFIGURATIONS Number of Injections: 25 Can be used with any ADC product	SEC (Gel Filtration) HPLC LMW Protein Standard The kit consists of four proteins with a MW range of 6.5 to 43 KDa and a small molecule with MW of 154 Da. The broad range of protein molecular weight coverage allows easy identification of small molecules, conjugates, and aggregates in a bioconjugation mixture, such as ADC and PDC.
AS0023 SERVICE (PER SAMPLE CHARGE)	SEC HPLC Analysis of Biopolymer, Conjugate, and ADC Size exclusion chromatography (SEC) HPLC is suitable for analyzing mixtures of biopolymers and separating the components according to size. It can be used to assess the extent of the bioconjugation and the degree of bioconjugate aggregation in a sample. A standard pdf file of the HPLC profile will be supplied.
AS0025 SERVICE (PER SAMPLE CHARGE)	HIC HPLC Analysis of Biopolymer, Conjugate, and ADC Hydrophobic interaction chromatography (HIC) HPLC separates components according to hydrophobicity. HIC has been used extensively to analyze drug loading in ADC or PDC. A standard pdf file of the HPLC profile will be supplied.

SERVICES AVAILABLE

Analysis of ADC & Ab
 DAR determination
 LC-MS (ESI)
 Technical Support



CM52110 PRODUCT CONFIGURATIONS Amount: 1 mg and 5 mg	BSA-DM1 (Mertansine) Conjugate Designed with similar linker chemistry as T-DM1 and can be used for immunization or immunoassay.
CM52112 PRODUCT CONFIGURATIONS Amount: 1 mg and 5 mg	BSA-DM4 (Ravtansine) Conjugate Designed with similar linker chemistry as T-DM1 and can be used for immunization or immunoassay.
CM52113 PRODUCT CONFIGURATIONS Amount: 1 mg and 5 mg	BSA-MMAE Conjugate Designed with VC-PAB linkage and can be used for immunization or immunoassay.
CM52140 PRODUCT CONFIGURATIONS Amount: 1 mg and 5 mg	BSA-Deruxtecan Conjugate Designed with same linkage as protein-deruxtecan conjugate and can be used for immunization or immunoassay.
CM62102 PRODUCT CONFIGURATIONS Amount: 1 mg, 5 mg, and 10 mg	Fluorescein-Doxorubicin Conjugate For fluorescent-based assay.
CM53209 PRODUCT CONFIGURATIONS Amount: 0.5 mg and 2 mg	HRP-MMAE (1:1) Conjugate Designed with VC-PAB linkage and can be used for immunization or immunoassay. Purified one MMAE labeled conjugate.
CM53210 PRODUCT CONFIGURATIONS Amount: 0.5 mg and 2 mg	HRP-MMAE (1:2) Conjugate Designed with VC-PAB linkage and can be used for immunization or immunoassay. Purified two MMAE labeled conjugate.
CM51100 PRODUCT CONFIGURATIONS Amount: 100 µg, 500 µg, and 1 mg	ADC Control hIgG1-MMAE Conjugate Control ADC for any IgG type antibody labeled with MMAE, particularly any ADC made using CellMosaic's ADC Kits. Average DAR of 4. Low endotoxin.
CM51102 PRODUCT CONFIGURATIONS Amount: 100 µg, 500 µg, and 1 mg	ADC Control hIgG1-SN38 Conjugate Control ADC for any IgG type antibody labeled with SN38, particularly any ADC made using CellMosaic's ADC Kits. Average DAR of 4. Low endotoxin.