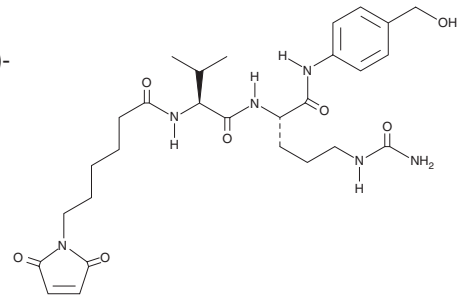
PRODUCT INFORMATION

Mc-Val-Cit-PAB

Item No. 28285

CAS Registry No.:	159857-80-4
Formal Name:	N-[6-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-1-oxohexyl]-L-valyl-N^5-(aminocarbonyl)-N-[4-(hydroxymethyl)phenyl]-L-ornithinamide
MF:	$C_{28}H_{40}N_6O_7$
FW:	572.7
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Mc-Val-Cit-PAB is supplied as a solid. A stock solution may be made by dissolving the Mc-Val-Cit-PAB in the solvent of choice, which should be purged with an inert gas. Mc-Val-Cit-PAB is soluble in DMSO.

Description

Mc-Val-Cit-PAB is a peptide linker molecule used in the synthesis of antibody-drug conjugates (ADCs).[1] It contains a maleimidocaproyl (Mc) group that can be conjugated to an antibody and a *p*-aminobenzyl (PAB) spacer that allows the peptide to be linked to active compounds, such as anticancer agents. Mc-Val-Cit-PAB is cleaved *in vivo* by cathepsin B, a protease highly expressed in cancer cells, which confers specificity of the ADC to cancer cells. Upon cleavage by cathepsin B, the active compound is released at the target site. Mc-Val-Cit-PAB has been used in the synthesis of an ADC containing the tubulin polymerization inhibitor KGP05. It has also been used as a precursor in the synthesis of Mc-Val-Cit-PABC-PNP (Item No. 23881).[2]

References

1. Mondal, D., Ford, J., and Pinney, K.G. Improved methodology for the synthesis of a cathepsin B cleavable dipeptide linker, widely used in antibody-drug conjugate research. *Tetrahedron Lett.* **59(40),** 3594-3599 (2018).
2. Dubowchik, G.M., Firestone, R.A., Padilla, L., *et al.* Cathepsin B-labile dipeptide linkers for lysosomal release of doxorubicin from internalizing immunoconjugates: Model studies of enzymatic drug release and antigen-specific in vitro anticancer activity. *Bioconjug. Chem.* **13(4),** 855-869 (2002).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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