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## Protective group strategies in carbohydrate and peptide chemistry

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### Citation

Ali, A. (2010, October 20). *Protective group strategies in carbohydrate and peptide chemistry*. Retrieved from <https://hdl.handle.net/1887/16497>

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**Note:** To cite this publication please use the final published version (if applicable).

# **Protecting group strategies in carbohydrate and peptide chemistry**

proefschrift

ter verkrijging van  
de graad van Doctor aan de Universiteit Leiden,  
op gezag van Rector Magnificus prof. mr. P.F. van der Heijden,  
volgens besluit van het College voor Promoties  
te verdedigen op woensdag 20 oktober 2010  
klokke 13.45 uur

door

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Geboren te Kasur (Pakistan) in 1978

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The research described in this Thesis is supported by the Higher Education Commission of Pakistan (HEC).

# Contents

<b>List of abbreviations</b>	5
<b>Chapter 1</b> General Introduction: Novel protecting groups in carbohydrate chemistry	9
<b>Chapter 2</b> The methylsulfonylethoxycarbonyl (Msc) as hydroxyl protecting group in carbohydrate chemistry	41
<b>Chapter 3</b> ([1 <i>H</i> ,1 <i>H</i> ,2 <i>H</i> ,2 <i>H</i> ,3 <i>H</i> ,3 <i>H</i> ]-perfluoroundecyl)sulfonylethoxycarbonyl (FPsc): a fluorous hydroxyl protecting group in carbohydrate chemistry	63
<b>Chapter 4</b> The methylsulfonylethoxymethyl (Msem) as a hydroxyl protecting group in carbohydrate chemistry	79
<b>Chapter 5</b> A two-step fluorous capping procedure in solid phase peptide synthesis	107
<b>Chapter 6</b> Summaru and future prospects	121
<b>Summary in Urdu</b>	131
<b>Curriculum Vitae</b>	135
<b>Acknowledgements</b>	137



## List of abbreviations

A	alanine	DMDO	dimethyl dioxirane
AA	amino Acid	DMF	dimethylformamide
Abu	2-aminobutyric acid	DMG	dimethylglutaryl
Ac	acetyl	DMM	dimethylmaloyl
ACN	acetonitril	DMP	dimethylphosphoryl
Ada	adamantanyl	DMSO	dimethylsulfoxide
Ala	alanine	DMT	dimethoxytrityl
All	allyl	DPM	diphenylmaloyl
aq	aqueous	dt	doublet of triplets
Arg	arginine	DTBMP	di- <i>tert</i> -butylmethylpyridine
arom	aromatic	DTBS	4,6-di- <i>tert</i> -butylsilylene
Asn	asparigine	E	glutamic acid
Asp	aspartic acid	E <sup>+</sup>	electrophilie
Az	azulen-1-yl-dicarbonyl	EDC	1-ethyl-3-(3-dimethylaminopropyl) carbodiimide
B	2-aminobutyric acid	eq.	equivalent
BDA	butanediacetal	Et	ethyl
Bn	benzyl	FHPLC	fluorous high performance liquid chromatography
Boc	<i>tert</i> -butoxycarbonyl	FLLE	fluorous liquid liquid extraction
bs	broad singlet	Fmoc	9-fluorenylmethyl carbonyl
BSP	1-Benzenesulfinyl Piperidine	FMsc	[1H,1H,2H,2H]-perfluorodecylsulfonyl ethoxy carbonyl
Bu	butyl	Fmsem	[1H,1H,2H,2H]-perfluorodecylsulfonyl ethoxymethyl
Bz	benzoyl	FPsc	[1H,1H,2H,2H,3H,3H]-perfluoroundecyl sulfonylethoxy carbonyl
CA	chloroacetyl	Fpsem	[1H,1H,2H,2H,3H,3H]-perfluoroundecyl sulfonylethoxymethyl
CDI	1,1'-carbonyldiimidazole	FSPE	fluorous solid phase extraction
CEM	cyanoethoxymethyl	FTIPS	fluorous di- <i>iso</i> -propylsilylanyl
C <sub>q</sub>	quartnary carbon	G	glycine
Cys	cysteine	G	guajazulene
D	aspartic acid	Gln	glutamine
d	doublet	Glu	glutamic acid
DBU	1,8-diazabicyclo[5.4.0]undec-7-ene	Gly	glycine
DCM	dichloromethane		
dd	doublet of doublets		
DDQ	2,3-Dichloro-5,6-dicyanobenzoquinone		
DG	diglycolyl		
Dipea	diisopropylethylamine		
DMAP	dimethylaminopyridine		

H	histidine	Npht	naphthaloyl
h	hours	NSEC	2-[dimethyl(2-naphthylmethyl)silyl]ethoxy
HCTU	2-(6-chloro-1H-benzotriazole-1-yl)-1,1,3,3-tetramethylaminium hexafluorophosphate		carbonyl
His	histidine	<i>p</i>	para
HRMS	high resolution mass spectrometry	P	proline
I	isoleucine	P	protective group
IAD	intramolecular aglycon delivery	PFD-OH	[1H,1H,2H,2H]-perfluorodecanoic acid
IDCP	iodonium-di- <i>sym</i> -collidine perchlorate	Ph	phenyl
Ile	isoleucine	Phth	phthaloyl
IR	infrared	Piv	pivaloyl
<i>J</i>	coupling constant	PMB	<i>p</i> -methoxybenzyl
K	lysine	pmc	2,24,6,7-pentamethyldihydrobenzofuran-5-sulfonyl
L	leucine	Pro	proline
LCMS	liquid chromatography mass spectroscopy	PST	phenylsulfenyltriflate
Leu	leucine	pyr	pyridine
Lev	levulinoyl	Q	glutamine
Lys	lysine	R	arginine
M	methionine	Rf	fluorinated alkyl
M	molar	<i>R<sub>f</sub></i>	retention factor
MBHA	methylbenzylhydraylamine	RNA	ribosnucleic acid
<i>m</i> -CPBA	3-chloroperoxybenzoic acid	RT	room temperature
Me	methyl	S	serine
Met	methionine	s	singlet
min.	minutes	SE	2-(trimethylsilyl)ethyl
MS	molecular sieves	Ser	serine
Msc	methylsulfonylethoxymethylcarbonyl	SPPS	solid phase peptide synthesis
Msem	methylsulfonylethoxymethyl	<i>t</i>	tertiary
MTM	methylthiomethyl	T	threonine
N	asparagine	t	triplet
Nap	2-naphthylmethyl	TBABr	tetrabutylammonium bromide
NBS	<i>N</i> -bromosuccinimide	TBAF	tetrabutylammonium fluoride
NIS	<i>N</i> -iodosuccinimide	TBAS	tetrabutylammonium sulfonate
NMNO	<i>N</i> -methylmorpholine <i>N</i> -oxide	TBDMS	<i>tert</i> -butyldimethylsilyl
NMP	<i>N</i> -methylpyrrolidone	TBDPS	<i>tert</i> -butyldiphenylsilyl
NMR	nuclear magnetic resonance spectroscopy	TBDS	di- <i>tert</i> -butylsilyl
NPB	Nitrophthalimidobutyric	TCA	trichloroacetyl

TDG	thiodiglycolyl
TEA	triethylamine
<i>tert</i>	Tertiary
Tf	Trifyl
TFA	trifluoroacetic acid
TFT	trifluorotoluene
THF	tetrahydrofuran
Thr	threonine
TIS	triisopropylsilane
TLC	thin layer chromatography
TMS	trimethylsilyl
TNBS	trinitrobenzenesulfonic acid
tol	toluene
TOM	tri- <i>iso</i> -propylsilyloxymethyl
Troc	trichloroethylcarbonyl\
Trp	tryptophan
Trt	trityl
Ts	tosyl
TTBP	tri- <i>tert</i> -butylpyrimidine
Tyr	tyrosine
UV	ultraviolet
V	valine
Val	valine
W	tryptophan
Y	tyrosine

