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## Activity-based protein profiling of glucosidases, fucosidases and glucuronidases

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# **Activity-based protein profiling of glucosidases, fucosidases and glucuronidases**

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To my family

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## List of abbreviations

ABP	activity-based probe	DMF	<i>N,N</i> -dimethylformamide
ABPP	activity-based protein profiling	DMSO	dimethylsulfoxide
Ac	acetyl	dt	double triplet
ACN	acetonitrile	DTT	dithiothreitol
AMP-	<i>N</i> -[5-(adamantan-1-yl-methoxy)-	EDC	1-ethyl-3-(3-dimethyl-
DNM	pentyl]-1-deoxynojirimycin		aminopropyl)-carbodiimide
aq.	aqueous	EDTA	ethylenediaminetetraacetate
Asp	aspartic acid	EEDQ	2-ethoxy-1-ethoxycarbonyl-1,2-
Bn	benzyl		dihydroquinoline
Boc	<i>tert</i> -butyloxycarbonyl	empAI	Exponentially modified protein
BODIPY	Boron-dipyrrromethane		abundance index
br	broad	eq.	molar equivalents
BSA	bovine serum albumin	Et	ethyl
C	chair	et al.	et alii (and others)
CAZy	carbohydrate-active enzymes	Fmoc	(9 <i>H</i> -fluoren-9-yl)methoxycarbonyl
CBE	conduritol $\beta$ -epoxide	FUCA	$\alpha$ -L-fucosidase
Cbz	benzyloxycarbonyl	GAA	lysosomal $\alpha$ -glucosidase
COS-7	African green monkey kidney	GBA	glucocerebrosidase
	fibroblast cell line	GBA2	nonlysosomal glucocerebrosidase
d	doublet	GBA3	broad specificity $\beta$ -glucosidase
$\delta$	chemical shift	GLA	lysosomal $\alpha$ -galactosidase
DBU	1,8-diazabicycloundec-7-ene	GLB	lysosomal $\beta$ -galactosidase
DCM	dichlormethane	GUSB	lysosomal $\beta$ -glucuronidase
dd	double doublet	h	hour(s)
ddd	double double doublet	HEK293	Human embryonic kidney cell line
DIC	<i>N,N</i> -diisopropyl carbodiimide	HEPES	4-(2-hydroxyethyl)-1-
DMAP	4-(dimethylamino)pyridine		piperazineethanesulfonic acid
HPLC	high performance liquid	SDS	sodium dodecyl sulfate
	chromatography	sp.	species
HPSE	heparanase	Su	succinimidyl
HRMS	high resolution mass	t	triplet
	spectrometry	TBAF	tetrabutylammonium fluoride



HRP	horseradish peroxidase	TBAI	tetrabutylammonium iodide
Hz	Hertz	TBS	Tris-buffered saline
IC <sub>50</sub>	half maximal inhibitory	<i>t</i> Bu	<i>tert</i> -butyl
IR	infrared	TEA	triethyl amine
<i>J</i>	coupling constant	<i>tert</i>	tertiary
LCMS	liquid chromatography mass spectrometry	Tf	triflate
m	multiplet	TFA	trifluoroacetic acid
M	molar	THF	tetrahydrofuran
<i>m/z</i>	mass to charge ratio	TLC	thin layer chromatography
<i>m</i> CPBA	<i>meta</i> -chloroperoxybenzoic acid	TMS	trimethylsilane
Me	methyl	Tris	2-amino-2-(hydroxymethyl)-1,3-propanediol
min	minutes	Trt	triphenylmethane
mRNA	messenger ribonucleic acid	UV	ultraviolet
MS	mass spectrometry	WT	wild type
NIS	<i>N</i> -iodosuccinimide		
NMR	nuclear magnetic resonance		
PBS	phosphate buffered saline		
Pd/C	palladium on charcoal		
PEG	polyethyleneglycol		
Ph	phenyl		
ppm	parts per million		
PVDF	polyvinylidene difluoride		
q	quartet		
quant.	quantitative		
R <sub>f</sub>	retention factor		
rt	room temperature		
R <sub>t</sub>	retention time		
rpm	revolutions per minute		
s	singlet		
sat.	saturated		

