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

HRP	horseradish peroxidase
Hz	Hertz
IC_{50}	half maximal inhibitory
IR	infrared
J	coupling constant
LCMS	liquid chromatography mass spectrometry
m	multiplet
M	molar
m/z	mass to charge ratio
*m*CPBA	*meta*-chloroperoxybenzoic acid
Me	methyl
min	minutes
mRNA	messenger ribonucleic acid
MS	mass spectrometry
NIS	*N*-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.	quantitive
R_f	retention factor
rt	room temperature
R_t	retention time
rpm	revolutions per minute
s	singlet
sat.	saturated
TBAI	tetrabutylammonium iodide
TBS	Tris-buffered saline
*t*Bu	*tert*-butyl
TEA	triethyl amine
tert	teritiary
Tf	triflate
TFA	trifluoroacetic acid
THF	tetrahydrofuran
TLC	thin layer chromatography
TMS	trimethylsilane
Tris	2-amino-2-(hydroxymethyl)-1,3-propanediol
Trt	triphenylmethane
UV	ultraviolet
WT	wild type