

## **Supporting Information**

# ***In Vitro and in Vivo Evaluation of GSK-3 Radioligands in Alzheimer's Disease: Preliminary Evidence of Sex Differences***

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**Table S1.** Results of *SAFETYscan* for OCM-44.

Assay Target	Mode	Result Type	Value Prefix	RC50 ( $\mu\text{M}$ )	Hill	Curve Bottom	Curve Top	Max Response
ADORA2A	Agonist	EC50	>	10				0
ADRA1A	Agonist	EC50	>	10				0
AVPR1A	Agonist	EC50	>	10				0.07
CCKAR	Agonist	EC50	>	10				0
CHRM1	Agonist	EC50	>	10				0.51
CHRM3	Agonist	EC50	>	10				0
EDNRA	Agonist	EC50	>	10				0
HRH1	Agonist	EC50	>	10				0
HTR2A	Agonist	EC50	>	10				1.13
HTR2B	Agonist	EC50	>	10				2.9
ADORA2A	Antagonist	IC50	>	10				21.54
ADRA1A	Antagonist	IC50	>	10				0.65
AVPR1A	Antagonist	IC50	>	10				0.23
CCKAR	Antagonist	IC50	>	10				0
CHRM1	Antagonist	IC50	>	10				7.81
CHRM3	Antagonist	IC50	>	10				0
EDNRA	Antagonist	IC50	>	10				0
HRH1	Antagonist	IC50	>	10				12.85
HTR2A	Antagonist	IC50	>	10				7.19
HTR2B	Antagonist	IC50	=	1.28659	0.44	0	100	90.77
ADRA2A	Agonist	EC50	>	10				3.85
ADRB1	Agonist	EC50	>	10				0
ADRB2	Agonist	EC50	>	10				0
CHRM2	Agonist	EC50	>	10				7.87
CNR1	Agonist	EC50	>	10				21.91
CNR2	Agonist	EC50	>	10				34.6
DRD1	Agonist	EC50	>	10				0
DRD2S	Agonist	EC50	>	10				8.41
HRH2	Agonist	EC50	>	10				0
HTR1A	Agonist	EC50	>	10				0
HTR1B	Agonist	EC50	>	10				4.29
OPRD1	Agonist	EC50	>	10				9.33
OPRK1	Agonist	EC50	>	10				25.41
OPRM1	Agonist	EC50	>	10				5
ADRA2A	Antagonist	IC50	>	10				0
ADRB1	Antagonist	IC50	>	10				17.18
ADRB2	Antagonist	IC50	>	10				16.94
CHRM2	Antagonist	IC50	>	10				2.34

CNR1	Antagonist	IC50	>	10					9.49
CNR2	Antagonist	IC50	>	10					0
DRD1	Antagonist	IC50	>	10					11.09
DRD2S	Antagonist	IC50	>	10					1.3
HRH2	Antagonist	IC50	>	10					13.18
HTR1A	Antagonist	IC50	>	10					4.51
HTR1B	Antagonist	IC50	>	10					0.16
OPRD1	Antagonist	IC50	>	10					0
OPRK1	Antagonist	IC50	>	10					0
OPRM1	Antagonist	IC50	>	10					0
CAV1.2	Blocker	IC50	>	10					8.05
GABAA	Blocker	IC50	>	10					0
hERG	Blocker	IC50	>	10					18.68
HTR3A	Blocker	IC50	>	10					38.81
KvLQT1/minK	Blocker	IC50	>	10					0.35
nAChR(a4/b2)	Blocker	IC50	>	10					46.39
NAV1.5	Blocker	IC50	>	10					31.96
NMDAR (1A/2B)	Blocker	IC50	>	10					14.65
GABAA	Opener	EC50	>	10					1.39
HTR3A	Opener	EC50	>	10					4.77
KvLQT1/minK	Opener	EC50	>	10					2.06
nAChR(a4/b2)	Opener	EC50	>	10					0
NMDAR (1A/2B)	Opener	EC50	>	10					2.25
INSR	Inhibitor	IC50	>	10					15.51
LCK	Inhibitor	IC50	>	10					15.18
ROCK1	Inhibitor	IC50	>	10					27.5
VEGFR2	Inhibitor	IC50	>	10					14.79
AR	Agonist	EC50	>	10					0
AR	Antagonist	IC50	>	10					9.05
GR	Agonist	EC50	>	10					0
GR	Antagonist	IC50	>	10					26.28
AChE	Inhibitor	IC50	>	10					0
COX1	Inhibitor	IC50	>	10					0
COX2	Inhibitor	IC50	>	10					0
MAOA	Inhibitor	IC50	>	10					0
PDE3A	Inhibitor	IC50	>	10					2.33
PDE4D2	Inhibitor	IC50	>	10					4.68
DAT	Blocker	IC50	>	10					0
NET	Blocker	IC50	>	10					4.51
SERT	Blocker	IC50	>	10					0

**Table S2.** Results of *SAFETYscan* for PF-367.

Assay Target	Mode	Result Type	Value Prefix	RC50 ( $\mu\text{M}$ )	Hill	Curve Bottom	Curve Top	Max Response
ADORA2A	Agonist	EC50	>	10				0
ADRA1A	Agonist	EC50	>	10				1.58
AVPR1A	Agonist	EC50	>	10				1.55
CCKAR	Agonist	EC50	>	10				1.13
CHRM1	Agonist	EC50	>	10				1
CHRM3	Agonist	EC50	>	10				0.36
EDNRA	Agonist	EC50	>	10				0.74
HRH1	Agonist	EC50	>	10				0
HTR2A	Agonist	EC50	>	10				2.5
HTR2B	Agonist	EC50	>	10				0
ADORA2A	Antagonist	IC50	>	10				11.09
ADRA1A	Antagonist	IC50	>	10				4.86
AVPR1A	Antagonist	IC50	>	10				0
CCKAR	Antagonist	IC50	>	10				0
CHRM1	Antagonist	IC50	>	10				2.6
CHRM3	Antagonist	IC50	>	10				1.43
EDNRA	Antagonist	IC50	>	10				0
HRH1	Antagonist	IC50	>	10				0
HTR2A	Antagonist	IC50	>	10				1.88
HTR2B	Antagonist	IC50	>	10				29.68
ADRA2A	Agonist	EC50	>	10				17.4
ADRB1	Agonist	EC50	>	10				0
ADRB2	Agonist	EC50	>	10				0.14
CHRM2	Agonist	EC50	>	10				12.52
CNR1	Agonist	EC50	>	10				18.25
CNR2	Agonist	EC50	>	10				29.32
DRD1	Agonist	EC50	>	10				0
DRD2S	Agonist	EC50	>	10				2.67
HRH2	Agonist	EC50	>	10				0.13
HTR1A	Agonist	EC50	>	10				0.79
HTR1B	Agonist	EC50	>	10				8.93
OPRD1	Agonist	EC50	>	10				3.3
OPRK1	Agonist	EC50	>	10				4.12
OPRM1	Agonist	EC50	>	10				6.61
ADRA2A	Antagonist	IC50	>	10				0
ADRB1	Antagonist	IC50	>	10				9.33
ADRB2	Antagonist	IC50	>	10				8.45
CHRM2	Antagonist	IC50	>	10				4.33

CNR1	Antagonist	IC50	>	10					0
CNR2	Antagonist	IC50	>	10					11.54
DRD1	Antagonist	IC50	>	10					8.43
DRD2S	Antagonist	IC50	>	10					0
HRH2	Antagonist	IC50	>	10					7.34
HTR1A	Antagonist	IC50	>	10					4.17
HTR1B	Antagonist	IC50	>	10					1.41
OPRD1	Antagonist	IC50	>	10					8.04
OPRK1	Antagonist	IC50	>	10					0
OPRM1	Antagonist	IC50	>	10					0.05
CAV1.2	Blocker	IC50	>	10					0.69
GABAA	Blocker	IC50	>	10					3.51
hERG	Blocker	IC50	>	10					6.41
HTR3A	Blocker	IC50	>	10					7.11
KvLQT1/minK	Blocker	IC50	>	10					0
nAChR(a4/b2)	Blocker	IC50	>	10					0
NAV1.5	Blocker	IC50	>	10					11.09
NMDAR (1A/2B)	Blocker	IC50	>	10					6.19
GABAA	Opener	EC50	>	10					2.43
HTR3A	Opener	EC50	>	10					0.76
KvLQT1/minK	Opener	EC50	>	10					4.55
nAChR(α4/β2)	Opener	EC50	>	10					21.39
NMDAR (1A/2B)	Opener	EC50	>	10					4.92
INSR	Inhibitor	IC50	>	10					7.67
LCK	Inhibitor	IC50	>	10					42.23
ROCK1	Inhibitor	IC50	>	10					11.61
VEGFR2	Inhibitor	IC50	>	10					6.29
AR	Agonist	EC50	>	10					0
AR	Antagonist	IC50	>	10					15.52
GR	Agonist	EC50	>	10					0
GR	Antagonist	IC50	>	10					9.82
AChE	Inhibitor	IC50	>	10					0
COX1	Inhibitor	IC50	>	10					0
COX2	Inhibitor	IC50	>	10					0
MAOA	Inhibitor	IC50	>	10					0
PDE3A	Inhibitor	IC50	>	10					0
PDE4D2	Inhibitor	IC50	>	10					6.56
DAT	Blocker	IC50	>	10					0.24
NET	Blocker	IC50	>	10					0
SERT	Blocker	IC50	>	10					0

