

Supplementary Table 3. Group multipliers

Coef	Gene	Roi	Multiplier
df_1	COMT	-	4.5826
df_2	GBA	-	2.2361
df_3	LRRK2	-	2
df_4	SNCA	-	2
$df_{1,1}$	COMT	Banks of Superior Temporal Sulcus	4.6904
$df_{1,2}$	COMT	Caudal Anterior Cingulate	4.6904
$df_{1,3}$	COMT	Caudal Middle Frontal	4.6904
$df_{1,4}$	COMT	Cuneus	4.6904
$df_{1,5}$	COMT	Entorhinal	4.6904
$df_{1,6}$	COMT	Fusiform	4.6904
$df_{1,7}$	COMT	Inferior Parietal	4.6904
$df_{1,8}$	COMT	Inferior Temporal	4.6904
$df_{1,9}$	COMT	Isthmus Cingulate	4.6904
$df_{1,10}$	COMT	Lateral Occipital	4.6904
$df_{1,11}$	COMT	Lateral Orbitofrontal	4.6904
$df_{1,12}$	COMT	Lingual	4.6904
$df_{1,13}$	COMT	Medial Orbitofrontal	4.6904
$df_{1,14}$	COMT	Middle Temporal	4.6904
$df_{1,15}$	COMT	Para Hippocampal	4.6904
$df_{1,16}$	COMT	Paracentral	4.6904
$df_{1,17}$	COMT	Pars Opercularis	4.6904
$df_{1,18}$	COMT	Pars Orbitalis	4.6904
$df_{1,19}$	COMT	Pars Triangularis	4.6904
$df_{1,20}$	COMT	Pericalcarine	4.6904
$df_{1,21}$	COMT	Postcentral	4.6904
$df_{1,22}$	COMT	Posterior Cingulate	4.6904
$df_{1,23}$	COMT	Precentral	4.6904
$df_{1,24}$	COMT	Precuneus	4.6904
$df_{1,25}$	COMT	Rostral Anterior Cingulate	4.6904
$df_{1,26}$	COMT	Rostral Middle Frontal	4.6904
$df_{1,27}$	COMT	Superior Frontal	4.6904
$df_{1,28}$	COMT	Superior Parietal	4.6904
$df_{1,29}$	COMT	Superior Temporal	4.6904
$df_{1,30}$	COMT	Supramarginal	4.6904
$df_{1,31}$	COMT	Frontal Pole	4.6904
$df_{1,32}$	COMT	Temporal Pole	4.6904
$df_{1,33}$	COMT	Transverse Temporal	4.6904
$df_{1,34}$	COMT	Insula	4.6904
$df_{2,1}$	GBA	Banks of Superior Temporal Sulcus	2.4495
$df_{2,2}$	GBA	Caudal Anterior Cingulate	2.4495
$df_{2,3}$	GBA	Caudal Middle Frontal	2.4495
$df_{2,4}$	GBA	Cuneus	2.4495
$df_{2,5}$	GBA	Entorhinal	2.4495
$df_{2,6}$	GBA	Fusiform	2.4495
$df_{2,7}$	GBA	Inferior Parietal	2.4495
$df_{2,8}$	GBA	Inferior Temporal	2.4495
$df_{2,9}$	GBA	Isthmus Cingulate	2.4495
$df_{2,10}$	GBA	Lateral Occipital	2.4495
$df_{2,11}$	GBA	Lateral Orbitofrontal	2.4495
$df_{2,12}$	GBA	Lingual	2.4495

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Supplementary Table 3. Continued

Coef	Gene	Roi	Multiplier
$df_{2,13}$	GBA	Medial Orbitofrontal	2.4495
$df_{2,14}$	GBA	Middle Temporal	2.4495
$df_{2,15}$	GBA	Para Hippocampal	2.4495
$df_{2,16}$	GBA	Paracentral	2.4495
$df_{2,17}$	GBA	Pars Opercularis	2.4495
$df_{2,18}$	GBA	Pars Orbitalis	2.4495
$df_{2,19}$	GBA	Pars Triangularis	2.4495
$df_{2,20}$	GBA	Pericalcarine	2.4495
$df_{2,21}$	GBA	Postcentral	2.4495
$df_{2,22}$	GBA	Posterior Cingulate	2.4495
$df_{2,23}$	GBA	Precentral	2.4495
$df_{2,24}$	GBA	Precuneus	2.4495
$df_{2,25}$	GBA	Rostral Anterior Cingulate	2.4495
$df_{2,26}$	GBA	Rostral Middle Frontal	2.4495
$df_{2,27}$	GBA	Superior Frontal	2.4495
$df_{2,28}$	GBA	Superior Parietal	2.4495
$df_{2,29}$	GBA	Superior Temporal	2.4495
$df_{2,30}$	GBA	Supramarginal	2.4495
$df_{2,31}$	GBA	Frontal Pole	2.4495
$df_{2,32}$	GBA	Temporal Pole	2.4495
$df_{2,33}$	GBA	Transverse Temporal	2.4495
$df_{2,34}$	GBA	Insula	2.4495
$df_{3,1}$	LRRK2	Banks of Superior Temporal Sulcus	2.2361
$df_{3,2}$	LRRK2	Caudal Anterior Cingulate	2.2361
$df_{3,3}$	LRRK2	Caudal Middle Frontal	2.2361
$df_{3,4}$	LRRK2	Cuneus	2.2361
$df_{3,5}$	LRRK2	Entorhinal	2.2361
$df_{3,6}$	LRRK2	Fusiform	2.2361
$df_{3,7}$	LRRK2	Inferior Parietal	2.2361
$df_{3,8}$	LRRK2	Inferior Temporal	2.2361
$df_{3,9}$	LRRK2	Isthmus Cingulate	2.2361
$df_{3,10}$	LRRK2	Lateral Occipital	2.2361
$df_{3,11}$	LRRK2	Lateral Orbitofrontal	2.2361
$df_{3,12}$	LRRK2	Lingual	2.2361
$df_{3,13}$	LRRK2	Medial Orbitofrontal	2.2361
$df_{3,14}$	LRRK2	Middle Temporal	2.2361
$df_{3,15}$	LRRK2	Para Hippocampal	2.2361
$df_{3,16}$	LRRK2	Paracentral	2.2361
$df_{3,17}$	LRRK2	Pars Opercularis	2.2361
$df_{3,18}$	LRRK2	Pars Orbitalis	2.2361
$df_{3,19}$	LRRK2	Pars Triangularis	2.2361
$df_{3,20}$	LRRK2	Pericalcarine	2.2361
$df_{3,21}$	LRRK2	Postcentral	2.2361
$df_{3,22}$	LRRK2	Posterior Cingulate	2.2361
$df_{3,23}$	LRRK2	Precentral	2.2361
$df_{3,24}$	LRRK2	Precuneus	2.2361
$df_{3,25}$	LRRK2	Rostral Anterior Cingulate	2.2361
$df_{3,26}$	LRRK2	Rostral Middle Frontal	2.2361
$df_{3,27}$	LRRK2	Superior Frontal	2.2361
$df_{3,28}$	LRRK2	Superior Parietal	2.2361

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Supplementary Table 3. Continued

Coef	Gene	Roi	Multiplier
<i>df</i> _{3,29}	LRRK2	Superior Temporal	2.2361
<i>df</i> _{3,30}	LRRK2	Supramarginal	2.2361
<i>df</i> _{3,31}	LRRK2	Frontal Pole	2.2361
<i>df</i> _{3,32}	LRRK2	Temporal Pole	2.2361
<i>df</i> _{3,33}	LRRK2	Transverse Temporal	2.2361
<i>df</i> _{3,34}	LRRK2	Insula	2.2361
<i>df</i> _{4,1}	SNCA	Banks of Superior Temporal Sulcus	2.2361
<i>df</i> _{4,2}	SNCA	Caudal Anterior Cingulate	2.2361
<i>df</i> _{4,3}	SNCA	Caudal Middle Frontal	2.2361
<i>df</i> _{4,4}	SNCA	Cuneus	2.2361
<i>df</i> _{4,5}	SNCA	Entorhinal	2.2361
<i>df</i> _{4,6}	SNCA	Fusiform	2.2361
<i>df</i> _{4,7}	SNCA	Inferior Parietal	2.2361
<i>df</i> _{4,8}	SNCA	Inferior Temporal	2.2361
<i>df</i> _{4,9}	SNCA	Isthmus Cingulate	2.2361
<i>df</i> _{4,10}	SNCA	Lateral Occipital	2.2361
<i>df</i> _{4,11}	SNCA	Lateral Orbitofrontal	2.2361
<i>df</i> _{4,12}	SNCA	Lingual	2.2361
<i>df</i> _{4,13}	SNCA	Medial Orbitofrontal	2.2361
<i>df</i> _{4,14}	SNCA	Middle Temporal	2.2361
<i>df</i> _{4,15}	SNCA	Para Hippocampal	2.2361
<i>df</i> _{4,16}	SNCA	Paracentral	2.2361
<i>df</i> _{4,17}	SNCA	Pars Opercularis	2.2361
<i>df</i> _{4,18}	SNCA	Pars Orbitalis	2.2361
<i>df</i> _{4,19}	SNCA	Pars Triangularis	2.2361
<i>df</i> _{4,20}	SNCA	Pericalcarine	2.2361
<i>df</i> _{4,21}	SNCA	Postcentral	2.2361
<i>df</i> _{4,22}	SNCA	Posterior Cingulate	2.2361
<i>df</i> _{4,23}	SNCA	Precentral	2.2361
<i>df</i> _{4,24}	SNCA	Precuneus	2.2361
<i>df</i> _{4,25}	SNCA	Rostral Anterior Cingulate	2.2361
<i>df</i> _{4,26}	SNCA	Rostral Middle Frontal	2.2361
<i>df</i> _{4,27}	SNCA	Superior Frontal	2.2361
<i>df</i> _{4,28}	SNCA	Superior Parietal	2.2361
<i>df</i> _{4,29}	SNCA	Superior Temporal	2.2361
<i>df</i> _{4,30}	SNCA	Supramarginal	2.2361
<i>df</i> _{4,31}	SNCA	Frontal Pole	2.2361
<i>df</i> _{4,32}	SNCA	Temporal Pole	2.2361
<i>df</i> _{4,33}	SNCA	Transverse Temporal	2.2361
<i>df</i> _{4,34}	SNCA	Insula	2.2361