

# Group Factor Analysis

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## Abstract

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TABLE 1  
Regions of interests (ROI) and their dimensionalities as used in Section 6.

Name	$D_m$	Name	$D_m$	Name	$D_m$
Frontal Pole	60	Insular Cortex	16	Superior Frontal Gyrus	21
Middle Frontal Gyrus	16	Inferior Frontal Gyrus	8	Precentral Gyrus	26
Temporal Pole	14	Superior Temporal Gyrus	9	Middle Temporal Gyrus	13
Inferior Temporal Gyrus	10	Postcentral Gyrus	26	Superior Parietal Lobule	6
Supramarginal Gyrus	11	Angular Gyrus	8	Lateral Occipital Cortex	55
Intracalcarine Cortex	4	Frontal Medial Cortex	3	Juxtapositional Lobule Cortex	8
Subcallosal Cortex	4	Paracingulate Gyrus	16	Cingulate Gyrus	19
Precuneous Cortex	20	Cuneal Cortex	3	Frontal Orbital Cortex	9
Parahippocampal Gyrus	9	Lingual Gyrus	12	Temporal Fusiform Cortex	7
Temporal Occipital Fusiform Cortex	6	Occipital Fusiform Gyrus	4	Frontal Operculum Cortex	2
Central Opercular Cortex	8	Parietal Operculum Cortex	4	Planum Polare	6
Heschl's Gyrus	2	Planum Temporale	4	Supracalcarine Cortex	1
Occipital Pole	16	Brain-Stem	20	Right Lateral Ventricle	8
Right Thalamus	8	Right Caudate	5	Right Putamen	6
Right Pallidum	2	Right Hippocampus	5	Right Amygdala	1
Right Accumbens	1	Left Lateral Ventrical	8	Left Thalamus	8
Left Caudate	3	Left Putamen	4	Left Pallidum	2
Left Hippocampus	5	Left Amygdala	1	Left Accumbens	1
Right I-IV	5	Right V	5	Vermis VI	1
Right VI	7	Vermis Crus I	14	Left Crus II	1
Vermis Crus II	10	Left VIIb	1	Vermis VIIb	6
Left VIIa	1	Vermis VIIa	3	Left VIIIb	1
Vermis VIIIb	4	Left IX	1	Vermis IX	4
Left X	1	Vermis X	1	Left I-IV	5
Left V	6	Left VI	8	Left Crus I	10
Right Crus I	13	Right Crus II	4	Right VIIb	3
Right VIIa	2	Right VIIIb	4	Right IX	1

TABLE 2

Feature groups and their dimensionalities as used in Section 7. The 13 first groups are the chemical descriptors, and the rest 139 groups are the functional pathways, repeated for each of the 3 cell line measurements.

Name	$D_m$	Name	$D_m$	Name	$D_m$
CW (capacity factor)	8	Calcineurin	3 × 2	EDG1	3 × 7
D (hydrophobic regions)	8	ETC	3 × 8	PlateletAPP	3 × 2
DD (contact distances)	3	NDKdynamain	3 × 7	PS1	3 × 2
DW (contact distances)	3	EPHA4	3 × 3	Proteasome	3 × 19
ED (hydrophobic local interaction)	3	EPO	3 × 2	Akapcentrosome	3 × 4
EW (hydrophilic local interaction)	3	ERK	3 × 3	RAB	3 × 8
HB (hydrogen bonding)	8	EIF	3 × 2	RAC1	3 × 7
HL (hydrophilic-lipophilic balance)	2	FAS	3 × 4	RAS	3 × 2
ID (hydrophobic integrity moment)	8	FCER1	3 × 5	NKcells	3 × 5
IW (hydrophilic integrity moment)	8	Feeder	3 × 9	CHREBP2	3 × 26
W (hydrophilic volume)	8	Fibrinolysis	3 × 3	BAD	3 × 4
Wp (polar volume)	8	FMLP	3 × 4	CK1	3 × 4
A.C.P.G.R.S.V (various properties)	6	Free	3 × 3	EIF2	3 × 2
NO1	3 × 12	GABA	3 × 8	P27	3 × 5
AMI	3 × 3	GATA3	3 × 3	PML	3 × 5
Granulocytes	3 × 2	Glycolysis	3 × 3	DREAM	3 × 2
ARAP	3 × 10	SET	3 × 3	LEPTIN	3 × 3
AGR	3 × 20	GH	3 × 4	RHO	3 × 9
AKAP95	3 × 3	AHSP	3 × 9	AKAP13	3 × 3
AKT	3 × 3	HIVnef	3 × 35	ATRBRCA	3 × 9
ALK	3 × 23	MPR	3 × 13	CardiacEGF	3 × 4
ACE2	3 × 4	p53hypoxia	3 × 8	HER2	3 × 3
DNAfragment	3 × 4	HIF	3 × 3	Mitochondria	3 × 3
SPPA	3 × 2	IL17	3 × 2	ACH	3 × 2
ATM	3 × 6	IL6	3 × 2	Parkin	3 × 9
AGPCR	3 × 2	IL10	3 × 3	RANMS	3 × 7
Bcellsurvival	3 × 5	IL2RB	3 × 16	NKT	3 × 16
Blymphocyte	3 × 3	IL22BP	3 × 2	IL1R	3 × 10
BCR	3 × 3	GSK3	3 × 4	MET	3 × 4
Biopeptides	3 × 18	Death	3 × 3	SHH	3 × 8
Neurotransmitters	3 × 5	Integrin	3 × 12	PTC1	3 × 2
RANKL	3 × 6	Intrinsic	3 × 20	SPRY	3 × 4
CARM_ER	3 × 22	Keratinocyte	3 × 10	TCR	3 × 12
CASPASE	3 × 4	EGFR_SMRTE	3 × 3	TCytotoxic	3 × 2
CCR3	3 × 2	MAPK	3 × 74	TALL1	3 × 3
MCM	3 × 12	PPARA	3 × 49	TEL	3 × 5
G1	3 × 14	ETS	3 × 5	TGFB	3 × 4
G2	3 × 7	Monocyte	3 × 2	KREB	3 × 4
Cell2cell	3 × 3	MTOR	3 × 11	CTLA4	3 × 6
LAIR	3 × 11	PITX2	3 × 2	Longevity	3 × 3
Ceramide	3 × 2	VIP	3 × 4	SARS	3 × 5
TID	3 × 5	NFAT	3 × 30	PAR1	3 × 22
COMP	3 × 11	NOS1	3 × 7	TNFR2	3 × 3
HDAC	3 × 3	RARRXR	3 × 3	TOLL	3 × 9
GCR	3 × 4	NuclearRs	3 × 7	TPO	3 × 2
CellCycle	3 × 5	ARENRF2	3 × 4	ARF	3 × 4
CFTR	3 × 2	p38MAPK	3 × 2	VEGF	3 × 11
Cytokine	3 × 4	p53	3 × 2	VITCB	3 × 2
Inflam	3 × 23	PDGF	3 × 3	WNT	3 × 6
DC	3 × 7	PTDINS	3 × 8	ActinY	3 × 7
MTA3	3 × 10	PLCE	3 × 3		