

3 Plane Localizer	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	Seq, Fast
	Plane	3-PLANE	IMAGE ENHANCE	
	Series Description	3 Plane Localizer	Filter Choice	None
	SCAN RANGE		GATING/TRIGGER	
	FOV	26.0	Auto Trigger Type	Off
	Slice Thickness	5.0	MULTI-PHASE	
	Slice Spacing	0.0	Seperate Series	0
	ACQ TIMING		Mask Phase	0
	Freq	256	Mask Pause	0
	Phase	128	DIFFUSION	
	Freq DIR	Unswap	Recon All Images	On
	NEX	1.00	CONTRAST	
	Phase FOV	1.00	Contrast Yes/No	No
	Auto Shim	Auto		
	Phase Correction	No		
	FMRI			
	PSD Trigger	Internal		
	Slice Order	Interleaved		
	View Order	Bottom/Up		
	# of Repetitions REST	0		
	# of Repetitions ACTIVE	0		
	SAT			
Tag Type	None			
TRICKS				
Pause On/Off	On			
Auto Subtract	0			
Auto SCIC	Off			

3 Plane Localizer

Calibration Scan	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	SPGR
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ZIP2, Calib
	Plane	AXIAL	SCAN RANGE	
	Series Description	Calibration Scan	FOV	30.0
	SCAN TIMING		Slice Thickness	9.4
	Number of Echoes	1	ACQ TIMING	
	IMAGE ENHANCE		Freq DIR	R/L
	Filter Choice	None	Auto Shim	Auto
	GATING/TRIGGER		Phase Correction	No
	Auto Trigger Type	Off	FMRI	
	MULTI-PHASE		PSD Trigger	Internal
	Seperate Series	0	Slice Order	Interleaved
	Mask Phase	0	View Order	Bottom/Up
	Mask Pause	0	# of Repetitions REST	0
	DIFFUSION		# of Repetitions ACTIVE	0
	Recon All Images	On	SAT	
	CONTRAST		Tag Type	None
	Contrast Yes/No	No	TRICKS	
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	

Calibration Scan

Accelerated Sagittal IR-FSPGR	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	SPGR
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, IrP, Asset
	Plane	SAGITTAL	SCAN RANGE	
	Series Description	Accelerated Sagittal IR-FSPGR	FOV	25.6
	SCAN TIMING		Slice Thickness	1.0
	Flip Angle	11	Location per Slab	200
	TE	Min Full	Overlap Locations	0
	TI	400	ACQ TIMING	
	Receiver Bandwidth	31.25	Freq	256
	IMAGE ENHANCE		Phase	256
	Filter Choice	None	Freq DIR	S/I
	GATING/TRIGGER		NEX	1.00
	Auto Trigger Type	Off	Phase FOV	1.00
	FMRI		Auto Shim	On
	PSD Trigger	Internal	Phase Correction	No
	Slice Order	Interleaved	USER CVS	
	View Order	Bottom/Up	User CV6	1.00
	# of Repetitions REST	0	User CV23	100.00
	# of Repetitions ACTIVE	0	MULTI-PHASE	
	SAT		Seperate Series	0
	Tag Type	None	Mask Phase	0
	TRICKS		Mask Pause	0
	Pause On/Off	On	DIFFUSION	
Auto Subtract	0	Recon All Images	On	
Auto SCIC	2	CONTRAST		
OTHERS		Contrast Yes/No	No	
Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.			

Accelerated Sagittal IR-FSPGR

Sagittal 3D FLAIR	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	Cube T2 FLAIR
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, IrP, ARC
	Plane	SAGITTAL	SCAN RANGE	
	Series Description	Sagittal 3D FLAIR	FOV	25.6
	SCAN TIMING		Slice Thickness	1.2
	TE	119.0	Location per Slab	186
	TR	4800.0	Overlap Locations	0
	TI	1473	ACQ TIMING	
	Echo Train Length	182	Freq	256
	Receiver Bandwidth	31.25	Phase	256
	IMAGE ENHANCE		Freq DIR	S/I
	Filter Choice	None	NEX	1.00
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	FMRI		Phase Correction	No
	PSD Trigger	Internal	USER CVS	
	Slice Order	Interleaved	User CV5	1.00
	View Order	Bottom/Up	MULTI-PHASE	
	# of Repetitions REST	0	Seperate Series	0
	# of Repetitions ACTIVE	0	Mask Phase	0
	SAT		Mask Pause	0
	Tag Type	None	DIFFUSION	
	Fat/Water Saturation	Fat	Recon All Images	On
TRICKS		CONTRAST		
Pause On/Off	On	Contrast Yes/No	No	
Auto Subtract	0			
Auto SCIC	2			
OTHERS				
Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.			

Sagittal 3D FLAIR

Axial T2 Star	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	FC, EDR
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial T2 Star	FOV	22.0
	SCAN TIMING		Slice Thickness	4.0
	Flip Angle	20	Slice Spacing	0.0
	TE	20.0	ACQ TIMING	
	Number of Echoes	1	Freq	256
	TR	650.0	Phase	192
	Receiver Bandwidth	25.00	Freq DIR	A/P
	IMAGE ENHANCE		NEX	1.00
	Filter Choice	None	# of Acq. Before Pause	0
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	MULTI-PHASE		Phase Correction	No
	Seperate Series	0	FMRI	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	Slice Order	Interleaved
	DIFFUSION		View Order	Bottom/Up
	Recon All Images	On	# of Repetitions REST	0
	CONTRAST		# of Repetitions ACTIVE	0
	Contrast Yes/No	No	SAT	
			Tag Type	None
		TRICKS		
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	2	
		OTHERS		
		Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.	

Axial T2 Star

Axial 3D pCASL (Eyes Open)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	3DASL
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, Spiral
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial 3D pCASL (Eyes Open)	FOV	24.0
	SCAN TIMING		Slice Thickness	4.0
	Receiver Bandwidth	62.50	ACQ TIMING	
	IMAGE ENHANCE		Freq	512
	Filter Choice	None	Phase	8
	GATING/TRIGGER		Freq DIR	R/L
	Auto Trigger Type	Off	NEX	3.00
	MULTI-PHASE		Auto Shim	Auto
	Seperate Series	0	Phase Correction	No
	Delay after Acquisition without AV	0	FMRI	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	Slice Order	Interleaved
	TRICKS		View Order	Bottom/Up
	Pause On/Off	On	# of Repetitions REST	0
	Auto Subtract	0	# of Repetitions ACTIVE	0
Auto SCIC	Off	DIFFUSION		
OTHERS		Recon All Images	On	
Protocol Notes	Tips: -When prescribing the 3D slab, the bottom of the slab should be positioned at the bottom of the cerebellum			
		CONTRAST		
		Contrast Yes/No	No	

Axial 3D pCASL (Eyes Open)

Axial DTI	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Spin Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EPI, DIFF, Asset
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial DTI	FOV	23.2
	SCAN TIMING		Slice Thickness	2.0
	TE	Minimum	Slice Spacing	0.0
	TR	7800.0	ACQ TIMING	
	Number of Shots	1	Freq	116
	IMAGE ENHANCE		Phase	116
	Filter Choice	None	Freq DIR	R/L
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	FMRI		Phase Correction	Yes
	PSD Trigger	Internal	USER CVS	
	Slice Order	Interleaved	User CV5	1.00
	View Order	Bottom/Up	User CV17	1.00
	# of Repetitions REST	0	MULTI-PHASE	
	# of Repetitions ACTIVE	0	Seperate Series	0
	SAT		Mask Phase	0
	Tag Type	None	Mask Pause	0
	Fat/Water Saturation	Fat	DIFFUSION	
	TRICKS		Optimized TE	Yes
	Pause On/Off	On	Diffusion Directions	Tensor
Auto Subtract	0	Number of Diffusion Directions	48	
Auto SCIC	2	Number of T2 Images	6	
OTHERS		Dual Spin Echo	Off	
Protocol Notes	Please do not oblique. Please do not reduce the number of slices. Please do not adjust protocol values.	Diffusion Tenser Processing Output	No Selection	
		Recon All Images	Off	
		CONTRAST		
		Contrast Yes/No	No	

Axial DTI

Axial rsfMRI (Eyes Open)	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	MPh, EPI
	Plane	AXIAL	SCAN RANGE	
	Series Description	Axial rsfMRI (Eyes Open)	FOV	22.0
	SCAN TIMING		Slice Thickness	3.4
	Flip Angle	90	Slice Spacing	0.0
	TE	30.0	ACQ TIMING	
	TR	3000.0	Freq	64
	Number of Shots	1	Phase	64
	IMAGE ENHANCE		Freq DIR	R/L
	Filter Choice	None	NEX	1.00
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Off
	FMRI		Phase Correction	Yes
	Initial State	Control	USER CVS	
	PSD Trigger	Internal	User CV0	1.00
	Slice Order	Interleaved	MULTI-PHASE	
	View Order	Bottom/Up	Slice per Location	200
	# of Repetitions REST	0	Phase Acquisition Order	Interleaved
	# of Repetitions ACTIVE	0	Delay after Acquisition	Minimum
	SAT		Seperate Series	0
	Tag Type	None	Delay after Acquisition without AV	2
	Fat/Water Saturation	Fat	Mask Phase	0
TRICKS		Mask Pause	0	
Pause On/Off	On	DIFFUSION		
Auto Subtract	0	Recon All Images	On	
Auto SCIC	Off	CONTRAST		
OTHERS		Contrast Yes/No	No	
Protocol Notes	<p><i>*Instruct patient to keep eyes open during this scan and to focus on 1 spot. Cover brain in one acq, ensure slab is positioned from inferior to superior. Must have 48 slices, please do not subtract or add any slices. Do not oblique slices. (Do not change series description)</i></p>			

Axial rsfMRI (Eyes Open)

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	Fast, Asset
Plane	OBLIQUE	SCAN RANGE	
Series Description	HighResHippo	FOV	17.5
SCAN TIMING		Slice Thickness	2.0
Flip Angle	122	Slice Spacing	Intleave
TE	50.0	ACQ TIMING	
Number of Echoes	1	Freq	448
TR	8020.0	Phase	448
Echo Train Length	15	Freq DIR	S/I
Receiver Bandwidth	20.83	Fat Shift DIR	Normal (I)
IMAGE ENHANCE		NEX	1.00
Filter Choice	None	# of Acq. Before Pause	0
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	Yes
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	User CV22	1.00
View Order	Bottom/Up	MULTI-PHASE	
# of Repetitions REST	0	Seperate Series	0
# of Repetitions ACTIVE	0	Mask Phase	0
SAT		Mask Pause	0
Tag Type	None	DIFFUSION	
TRICKS		Recon All Images	On
Pause On/Off	On	CONTRAST	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	2	OTHERS	
OTHERS		Protocol Notes	Angle the slices perpendicular to the hippocampul body. Please refer to the study manual for further details.

HighResHippo

HighResHippo