

### Histology Assay List

Flagship Biosciences offers 'off-the-shelf' assays which are either IVD verified, validated, or optimized for use in Flagship's CAP/CLIA laboratory. Validated assays are for either CLIA (prospective clinical) or Non-CLIA (retrospective clinical) use. Optimized assays are acceptable for discovery use. Please inquire with Flagship Biosciences about experience with other assays not currently available on the list.

Validation Level	Type	Sub-Type	Antibody/Probe
CLIA: IVD Verified	IHC	Monoplex	CD138
CLIA: IVD Verified	IHC	Monoplex	CD20
CLIA: IVD Verified	IHC	Monoplex	CD3
CLIA: IVD Verified	IHC	Monoplex	CD4
CLIA: IVD Verified	IHC	Monoplex	CD68
CLIA: IVD Verified	IHC	Monoplex	COX2
CLIA: IVD Verified	IHC	Monoplex	Dako HercepTest
CLIA: IVD Verified	IHC	Monoplex	ER/PR pharmDx
CLIA: IVD Verified	IHC	Monoplex	FRA
CLIA: IVD Verified	IHC	Monoplex	PD-L1 SP263
CLIA: IVD Verified	IHC	Monoplex	PD-L1 22C3
CLIA Validated	IHC	Monoplex	EP4
CLIA Validated	IHC	Monoplex	LIGHT
Non-CLIA Validated	IHC	Monoplex	Alpha-1-Antitrypsin (Total AAT)
Non-CLIA Validated	IHC	Monoplex	Arginase 1
Non-CLIA Validated	IHC	Monoplex	AXL
Non-CLIA Validated	IHC	Monoplex	CD11b
Non-CLIA Validated	IHC	Monoplex	CD11c
Non-CLIA Validated	IHC	Monoplex	CD163
Non-CLIA Validated	IHC	Monoplex	CD19
Non-CLIA Validated	IHC	Monoplex	CD20
Non-CLIA Validated	IHC	Monoplex	CD3
Non-CLIA Validated	IHC	Monoplex	CD32a
Non-CLIA Validated	IHC	Monoplex	CD4
Non-CLIA Validated	IHC	Monoplex	CD45
Non-CLIA Validated	IHC	Monoplex	CD47
Non-CLIA Validated	IHC	Monoplex	CD56
Non-CLIA Validated	IHC	Monoplex	CD68 KP1
Non-CLIA Validated	IHC	Monoplex	CD68 PGM1
Non-CLIA Validated	IHC	Monoplex	CD8
Non-CLIA Validated	IHC	Monoplex	Cleaved Caspase-3
Non-CLIA Validated	IHC	Monoplex	CSF1R
Non-CLIA Validated	IHC	Monoplex	EGFR

Validation Level	Type	Sub-Type	Antibody/Probe
Non-CLIA Validated	IHC	Monoplex	FoxP3
Non-CLIA Validated	IHC	Monoplex	GITR
Non-CLIA Validated	IHC	Monoplex	Granzyme B
Non-CLIA Validated	IHC	Monoplex	HLA-DR
Non-CLIA Validated	IHC	Monoplex	IDO-1
Non-CLIA Validated	IHC	Monoplex	Ki67
Non-CLIA Validated	IHC	Monoplex	LAG3
Non-CLIA Validated	IHC	Monoplex	LC3B
Non-CLIA Validated	IHC	Monoplex	OX40
Non-CLIA Validated	IHC	Monoplex	p4EBP1
Non-CLIA Validated	IHC	Monoplex	P62
Non-CLIA Validated	IHC	Monoplex	Pan-CK
Non-CLIA Validated	IHC	Monoplex	PD-1
Non-CLIA Validated	IHC	Monoplex	PD-L1 E1L3N
Non-CLIA Validated	IHC	Monoplex	pS6
Non-CLIA Validated	IHC	Monoplex	PSMA
Non-CLIA Validated	IHC	Monoplex	pSMAD2
Non-CLIA Validated	IHC	Monoplex	SIRPa
Non-CLIA Validated	IHC	Monoplex	Tie2
Non-CLIA Validated	IHC	Monoplex	UBA1
Non-CLIA Validated	IHC	Duplex	CD226/CD8
Non-CLIA Validated	IHC	Duplex	CD4/FoxP3
Non-CLIA Validated	IHC	Duplex	CD8/CD3
Non-CLIA Validated	IHC	Duplex	CD8/FoxP3
Non-CLIA Validated	IHC	Duplex	CD8/Ki67
Non-CLIA Validated	IHC	Triplex	CD56/CD8/FoxP3
Non-CLIA Validated	IHC	Triplex	CD68/CD8/FoxP3
Non-CLIA Validated	IF	Duplex	EPCAM/P-cadherin
Non-CLIA Validated	IF	Duplex	a-SARC/Merossin
Non-CLIA Validated	IF	Duplex	b-SARC/Merossin
Non-CLIA Validated	IF	Duplex	d-SARC/Merossin
Non-CLIA Validated	IF	Duplex	g-SARC/Merossin
Non-CLIA Validated	IF	Duplex	Mandys106/Merossin
Optimized	IHC	Monoplex	AHR
Optimized	IHC	Monoplex	ALDH1
Optimized	IHC	Monoplex	Alpha SMA
Optimized	IHC	Monoplex	B2M
Optimized	IHC	Monoplex	Bcl-2
Optimized	IHC	Monoplex	Bcl-xl
Optimized	IHC	Monoplex	CD103
Optimized	IHC	Monoplex	CD19

Validation Level	Type	Sub-Type	Antibody/Probe
Optimized	IHC	Monoplex	CD24
Optimized	IHC	Monoplex	CD33
Optimized	IHC	Monoplex	CD40
Optimized	IHC	Monoplex	CD40-L
Optimized	IHC	Monoplex	CD45RA
Optimized	IHC	Monoplex	CD66e (Ceacam 5)
Optimized	IHC	Monoplex	CD96
Optimized	IHC	Monoplex	CD98
Optimized	IHC	Monoplex	CK5/6
Optimized	IHC	Monoplex	Cleaved Caspase-8
Optimized	IHC	Monoplex	c-MET
Optimized	IHC	Monoplex	CTAG1B
Optimized	IHC	Monoplex	CXCL12
Optimized	IHC	Monoplex	CXCR4
Optimized	IHC	Monoplex	E-Cadherin
Optimized	IHC	Monoplex	EPCAM
Optimized	IHC	Monoplex	ERCC1
Optimized	IHC	Monoplex	FAPalpha
Optimized	IHC	Monoplex	GFAP
Optimized	IHC	Monoplex	GFP
Optimized	IHC	Monoplex	GPC3
Optimized	IHC	Monoplex	H3K27AC (Anti-Histone H3)
Optimized	IHC	Monoplex	HIF-1-alpha
Optimized	IHC	Monoplex	ICAM1
Optimized	IHC	Monoplex	IDH1
Optimized	IHC	Monoplex	IL10Ra
Optimized	IHC	Monoplex	iNOS
Optimized	IHC	Monoplex	Insulin + Proinsulin
Optimized	IHC	Monoplex	KDEL
Optimized	IHC	Monoplex	MAGE-A4
Optimized	IHC	Monoplex	MBP
Optimized	IHC	Monoplex	MHC-1 (HLA-1)
Optimized	IHC	Monoplex	Napsin A
Optimized	IHC	Monoplex	Nav 1.7
Optimized	IHC	Monoplex	p40
Optimized	IHC	Monoplex	PAP
Optimized	IHC	Monoplex	P-cadherin
Optimized	IHC	Monoplex	PDL1
Optimized	IHC	Monoplex	pERK
Optimized	IHC	Monoplex	PRAME
Optimized	IHC	Monoplex	PSGL1

Validation Level	Type	Sub-Type	Antibody/Probe
Optimized	IHC	Monoplex	PVR
Optimized	IHC	Monoplex	Rad51
Optimized	IHC	Monoplex	SIRPalpha
Optimized	IHC	Monoplex	SOX-10
Optimized	IHC	Monoplex	SSX2
Optimized	IHC	Monoplex	STING
Optimized	IHC	Monoplex	Survivin
Optimized	IHC	Monoplex	TAZ
Optimized	IHC	Monoplex	TIGIT
Optimized	IHC	Monoplex	TM4SF1
Optimized	IHC	Monoplex	TROP-2
Optimized	IHC	Monoplex	TTF-1
Optimized	IHC	Monoplex	VegF Receptor 2
Optimized	IHC	Monoplex	Vista
Optimized	IHC	Monoplex	VSIG4
Optimized	IHC	Monoplex	WT1
Optimized	IHC	Monoplex	YAP1
Optimized	IHC	Duplex	CD8/PDL1
Optimized	IHC	Duplex	CD68/MHCII
Optimized	IHC	Duplex	CD163/CD68
Optimized	IHC	Duplex	P16/MUC5B
Optimized	IHC	Duplex	PD1/CD8
Optimized	IHC	Triplex	CCL22/CD206/CD163
Optimized	IF	Duplex	Androgen Receptor/Merosin
Optimized	IF	Duplex	CD3/CD8
Optimized	IF	Duplex	DYS2/Merosin
Optimized	CISH	Monoplex	CCR8
Optimized	CISH	Monoplex	ERN2
Optimized	CISH	Monoplex	FOXP3
Optimized	CISH	Monoplex	MUC5B
Optimized	CISH	Monoplex	NRCAM
Optimized	CISH	Monoplex	TGFB1
Optimized	CISH	Monoplex	TNFS14 (LIGHT)
Optimized	CISH	Duplex	ERN2/MUC5B
Optimized	CISH	Duplex	MERTK/AXL
Optimized	FISH	Duplex	IFNG/FOXP3
Optimized	Opal mIF	Triplex	CD96/PVR/TIGIT
Optimized	Opal mIF	6-plex	CD3/Ki67/CD137/CD56/CD8/PanK
Optimized	Opal mIF	6-plex	CD33/HLADR/CD11b/CD14/CD15/CD66b
Optimized	Opal mIF	6-plex	CD4/CD21/FOXP3/Ki67/CD20/CD8
Optimized	Opal mIF	6-plex	CD45RA/CD4/CCR7/CD45RO/FOXP3/CD8

Validation Level	Type	Sub-Type	Antibody/Probe
Optimized	Opal mIF	6-plex	CD47/PDL1/CD163/iNOS/CD68/PanK
Optimized	Opal mIF	6-plex	CD86/CD64/CD11b/CD163/CD206/CD8
Optimized	Opal mIF	6-plex	GranzymeB/CD4/FOXP3/CD45RO/Ki67/CD8
Optimized	Opal mIF	6-plex	LAG3/CD3/PD1/CTLA4/TIM3/CD8
Optimized	Opal mIF	6-plex	PDL1/CD3/CD163/CD56/CD8/CD68
Optimized	Opal mIF	6-plex	PDL1/HLADR/CD163/CD14/CD68/PanK
Optimized	Opal mIF	6-plex	Vista/CD4/HLADR/PD1/CD8/PanK
Optimized	Opal mIF	6-plex	VSIG4/PSGL1/CD3/CD163/CD8/CD68