



Histogenotech research center antibodies list

Adipocyte Markers		Basal Cell Markers
1. Adiponectin	8. LPIN-1	1. Bcl-2
2. ALK7	9. LPL	2. CD44
3. ALBP/aP2	10. Perilipin	3. Keratin 14
4. FABP	11. PPAR	4. p63
5. GLUT4	12. Resistin	5. P-Cadherin
6. GPDH	13. S-100	6. S100A6 (Calcyclin)
7. Leptin	14. UCP-1/UCP-2 (Uncoupling protein)	
Keratinocytes Markers		
1. 174H.64		14. K1/K10 Keratin
2. Calmodulin		15. K5/K14 Keratin
3. Calmodulin-like skin protein		16. K3/K12 Keratin
4. CD24 (heat stable antigen, nectadrin)		17. K6/K16/K17 Keratin
5. CD34		18. KL3
6. CD98		19. KPRP
7. Epidermal calcium-binding protein (ECaBP)		20. Laminin-5
8. Fibronectin		21. Minoxidil Sulfotransferase
9. Filaggrin		22. MTS24
10. G6K12		23. SKALP
11. ICAM-1		24. SPR1 (small proline-rich protein-1)
12. SPRR1B (small proline-rich protein 1B)		25. Involucrin
13. Keratinocyte transglutaminase		26. Thrombomodulin (TM)
Cardiomyocyte Markers		Chondrocyte Markers
1. Adrenomedullin	14. Desmin	1. Aggrecan
2. ALCAM	15. GATA-4	2. Annexin VI
3. Alpha-Actin	16. GATA-6	3. beta1 Integrin (CD29)
4. Annexin 5	17. IGF-1	4. Cathepsin B
5. Annexin 6	18. MHC	5. CD44, CD151, and CD49c
6. bFGF	19. MLC	6. CMP (cartilage matrix protein, Matrilin-1)
7. BNP	20. N-cadherin	7. Collagen II
8. Cardiac troponin I	21. Nkx2.5	8. Collagen IX
9. Cardiac troponin-T	22. Oct-4	9. Collagen X
10. Caveolin-2	23. Sarcomeric alpha Actin/Actinin	10. IGF-I and IGF-II
11. Caveolin-3	24. Sarcomeric Myosin	11. MMP13 (matrix metalloproteinase-13)
12. CNP	25. Sarcomeric Tropomyosin	12. Osteonectin (SPARC)
13. Connexin-43	26. Skeletal alpha-Actin	13. PCNA and p21
		14. Sox9
		15. Syndecan-3



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Dendritic Cell Markers		Fibroblast Markers
1. CD1a	6. CD208	1. Endogenous peroxidases in normal human dermis
2. CD11c	7. Clusterin	2. ER-TR7
3. CD21	8. DC-LAMP (CD208)	3. Fibroblast-specific protein 1 (FSP1)
4. CD83	9. Estrogen Receptor-alpha	
5. CD86	10. S-100	
Endothelial Cell Markers		
1. ACE (angiotensin-converting enzyme)		13. CD54 (ICAM-1)
2. TEM1 (Tumor endothelial marker 1)		14. CD62P (p-Selectin GMP140)
3. TEM5 (Tumor endothelial marker 5)		15. CD105 (Endoglin)
4. VEGF (Vascular endothelial growth factor)		16. CD146 (P1H12)
5. Flk-1 (VEGFR-2)		17. VCAM
6. Flt-1 (VEGFR-1)		18. MECA-32
7. GBP-1 (guanylate-binding protein-1)		19. VE-cadherin (CD144)
8. ICAM-2 (intercellular adhesion molecule 2)		20. E-selectin
9. MRB (magic roundabout)		21. Endoglin (CD105)
10. Thrombomodulin (TM, CD141)		22. Endoglyx-1
11. CD31 (PECAM-1)		23. Nucleolin
12. CD34		
Epithelial Cell Markers		
1. A6 antigen	16. Cytokeratins	30. Cytokeratins 8, 14, 18, and 19
2. Desmin	17. Cytokeratin-8 (CK8)	31. Normal Epithelial Cell Specific-1 (NES1)/kallikrein-10
3. Aminopeptidase N	18. Neutral Aminopeptidase	32. p63
4. BerEP4 (Ber-EP4)	19. Cytokeratin-18 (CK18)	33. P-Cadherin
5. beta-Crystallin	20. Cytokeratin-19	34. Prominin-1 (CD133)
6. Calcyclin	21. RTE 1	35. Prostate Antigen (PA)
7. Foxa1	22. Adenosine 5'-Triphosphatase	36. Prostatic Binding Protein (PBP)
8. Cathepsin E (CaE)	23. Connexin-43 (Cx43)	37. PSCA (Prostate stem cell antigen)
9. Cystatin C	24. GGT	38. Carcinoembryonic Antigen (CEA)
10. KL-6	25. Glutamine Synthetase	39. SPA(surfactant proteins A)
11. M1	26. Keratin 5 (K5)	40. Surfactant protein C (SPC)
12. MEP-1	27. Keratins 13 and 19	41. VAT-1
13. Ly110	28. LAMP-1	42. NSE (neuron-specific enolase)
14. Lectins	29. Vimentin	
15. P16		



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Granulosa Cell & Tumor Markers	Goblet Cell Markers
1. AMH (anti-mullerian hormone) 2. Aromatase (CYP19A1) 3. Estradiol 4. Fibronectin 5. Follicle regulatory protein (FRP) 6. Inhibin 7. MCAM (Melanoma cell adhesion molecule, CD146)	1. CDX-2 2. CK7 3. Das1 4. ITF 5. Keratin polypeptide 20 (K20) 6. Muc2 7. MUC5AC 8. UEA-1
Germ Cell & Tumor Markers	
1. 4C9 (carbohydrate antigen) 2. AFP (alpha-fetoprotein) 3. AP-2gamma 4. BMP15 (bone morphogenetic protein 15) 5. c-Kit (CD117) 6. DAZ-like 1(DAZL1) 7. EGFR (Epidermal growth factor receptor) 8. GCNA1 (germ cell nuclear antigen 1, GCNA-1) 9. GDF9 (growth and differentiation factor 9) 10. Glypican 3 11. Gonadotropin	12. Keratin 7 13. Lactate Dehydrogenase (LD) 14. M-CSF 15. MATER 16. OCT3/4 17. OCT4 18. p53 19. PLAP (placental-like alkaline phosphatase) 20. Proacrosin 21. Telomerase 22. ZAR1 (zygotic arrest 1)
Hematopoietic Progenitor Stem Cell Markers	Hepatocyte Markers
1. AC133 2. CD34 3. CD43 4. CD45 5. CD133/Prominin-1 6. c-Kit/CD117 7. Endomucin 8. Flk-2 (fetal liver kinase-2) 9. Ly-5 10. MYADM 11. Prominin-1/CD133 12. SCGF (stem cell growth factor) 13. TGF-beta2 14. Thy-1	1. Albumin 2. alpha-Fetoprotein (AFP) 3. Annexin I and Annexin II 4. anti-liver-kidney microsome antibody 5. C-reactive protein (CRP) 6. Hepatocyte antigen (Hep) 7. Hepatocyte Paraffin 1 (Hep Par 1) 8. Leucine Aminopeptidase (LAP) 9. Prospero-related homeobox 1 (Prox1) 10. Tyrosine Aminotransferase 11. Tryptophan Oxygenase 12. WT1



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Interneuron Markers		Kupffer Cell Markers	
1. Calbindin	10. CB1 (type 1 cannabinoid receptor)	1. CD14	
2. DLX	11. ChAT (choline acetyl-transferase)	2. CD68	
3. ER81	12. EN1 (pan>Engrailed-1, EN-EN-1)	3. ED1	
4. GABA	13. ISL1 (pan>IslIslet1)	4. ED2	
5. GATA	14. Lhx1 and Lhx5	5. G6PD	
6. Pax2	15. Neuropeptide Y (NPY)	6. Lectin	
7. SDF-1	16. Substance P Receptor (SPR)	7. Lysozyme	
8. Somatostatin	17. VIP(Vasoactive intestinal polypeptide)	8. TNF- α	
9. SPO			
Islet Cell Markers			
1. CGRP (Calcitonin gene-related peptide)		18. Adenylcyclase	
2. GAD (glutamic acid decarboxylase)		19. Amylase	
3. GLUT1/GLUT3 mRNA (Glucose Transporter 1, 3)		20. FoxA1	
4. hCG (human chorionic gonadotropin)		21. FoxA3	
5. IAPP/Amylin (Islet amyloid polypeptide)		22. GAD65/GAD67	
6. IPF1 (Insulin promoter factor 1)		23. Glucagon	
7. PDX-1 (Pancreatic duodenal homeobox factor-1)		24. Islet-1	
8. STF-1 (somatostatin transactivating factor-1)		25. Nestin	
9. GLUT-2 (Glucose Transporter 2)		26. Pax6	
10. GLP-1 (Glucagon-like peptide)		27. Pax4	
11. NSE (neuron-specific enolase)		28. Neurogenin 3 (Ngn3)	
12. Beta-2/NeuroD		29. Neuropeptide Y (NPY)	
13. Chromogranin A/B		30. Pancreatic polypeptide	
14. ICA (Islet vell antibodies)		31. GLUT-4 (Glucose transporter 4)	
15. C-reactive protein (CRP)		32. Somatostatin/Receptors	
16. Synaptophysin			
17. Tyrosine Hydroxylase			
Keratinocytes Markers		Mast Cell Markers	
1. CD24	12. Epidermal calcium-binding protein (ECaBP)	1. Carboxypeptidase A	
2. CD34	13. Fibronectin	2. Chymase	
3. CD98	14. Filaggrin	3. CD25	
4. ICAM-1	15. Involucrin	4. CD34	
5. KL3	16. Keratinocyte transglutaminase	5. CD117 (c-Kit)	
6. p63	17. K1/K10 Keratin	6. Histamine	
7. Plectin	18. K5/K14 Keratin	7. Ki-MC1	
8. SPRR1A	19. K6/K16/K17 Keratin	8. LAMP-1/LAMP-2	
9. TM	20. SPR1 (small proline-rich protein-1)	9. Mast Cell Tryptase	
10. Laminin-5			
11. Calmodulin			



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Myoepithelial Cell (MEC) Markers

1. alpha-SMA
2. Calponin
3. CD10
4. CD109
5. EGFR
6. Maspin
7. Nestin
8. P-cadherin
9. Vimentin
10. Neuropilin-1
11. P63
12. Caldesmon (CALD)
13. Carbonic Anhydrase III (CAIII)
14. Osteonectin (SPARC)
15. p75 neurotrophin receptor (p75NTR)
16. SMMHC (Smooth Muscle Myosin Heavy Chain)
17. Thy-1 (thymocyte differentiation antigen)
18. Cytokeratin 14
19. Cytokeratin 17

Natural Killer Cell Markers

1. 2B4 (CD244)
2. CD2
3. CD3
4. CD16
5. CD33
6. CD56
7. CD69
8. CD107a
9. CD161
10. H25 and H366
11. HP (Helix pomatia) Receptors
12. LAT (linker for activation of T cells)

Neuronal Markers

1. Acetylcholinesterase
2. Calbindin D28
3. Calbindin D28K
4. ChAT (choline acetyltransferase)
5. HSV-1 (Herpes simplex virus type 1)
6. MAG (myelin-associated glycoprotein)
7. NeuN (neuronal nuclei)
8. Neurofilament
9. NSE (neuron specific enolase)
10. NSP-C (Neuroendocrine-specific protein C)
11. OMP (olfactory marker protein)
12. PKC (Protein kinase C)
13. TGF-beta (transforming growth factor-beta)
14. Bcl-2
15. Bag1
16. Beta-tubulin
17. c-Fos
18. Calcineurin
19. Calretinin
20. Cerebellin
21. Cytochrome oxidase
22. MAP2
23. MIT-23
24. Nestin
25. SSEA-1
26. Synapsin I
27. TG-1

Myocyte Markers

1. ANP
2. BBF-1
3. BNP
4. Connexin-43
5. Desmin
6. Dystrophin (Xp21)
7. EGFP
8. Endothelin-1
9. FABP
10. GATA
11. MEF-2 (MEF2)
12. Myosin
13. N-cadherin
14. Nestin
15. Sarcomeric Actin
16. Troponin
17. Troponin I

Myofibroblast Markers

1. Actin
2. Cadherin-11
3. Desmin
4. EDA
5. SMA-alpha
6. Transforming growth factor
7. Thy-1
8. Tropomyosin-1



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Phagocyte Markers	Odontoblast Markers
1. CD36 2. CD64 3. CD68 4. CD204 5. c-fms 6. CSF-1 7. M-CSF 8. CD11b/CD18 (beta 2 integrins) 9. Meloperoxidase (MPO) 10. S100 proteins 11. TAcP (Tartrate-resistant acid phosphatase) 12. TPP-ase 13. alpha-1-Antitrypsin 14. Mac-1	1. Alkaline Phosphatase (ALP) 2. alpha 1 Type 1 Collagen (alpha I type I collagen) 3. DMP1/DMP2 (dentin matrix protein) 4. DSP (dentin sialoprotein, dentinsialoprotein) 5. Enamelysin 6. Nestin 7. Osteopontin (OPN) 8. Osteocalcin (OC)
Osteoclast Markers	Osteoblast Markers
1. acid ATPase 2. Calcitonin (CT) receptor (CTR) 3. Cathepsin K 4. CKBB (creatine kinase BB) 5. P1CP (procollagen carboxyterminal propeptide) 6. TRAP (tartrate-resistant acid phosphatase) 7. Vitronectin Receptor (VR, VNR)	1. Alkaline Phosphatase (ALP) 2. alpha 1(I) procollagen 3. Bone Sialoprotein (BSP) 4. Collagen Type I 5. Osteocalcin 6. Osteopontin
Sertoli Cell Markers	Oocyte Markers
1. ABP (androgen-binding protein) 2. AMH (anti-Mullerian hormone) 3. Calretinin 4. Cathepsin L 5. CK18 (Cytokeratin 18, CK-18) 6. Cytokeratin 7. Cyclic Potein-2 (CP-2) 8. Desmin 9. GATA-4 10. Inhibin B 11. M2A 12. MIS (Mullerian inhibiting substance) 13. Serotonin Receptor 14. SCF (stem cell factor) 15. Sox9 16. Vimentin	1. Bicaudal-D (Bic-D) 2. BMP15 (bone morphogenetic protein 15) 3. c-kit 4. Estradiol 5. GDF9 6. HBPP (heparin-binding placental protein) 7. IGFBP-1 8. Leptin 9. LH Receptor (LH-R) 10. MSY2 11. NALP9 12. Pentraxin 3 13. ZP (zona pellucida, ZP1, ZP2, ZP3 or ZPA, ZPB, ZPC) 14. ZAR1 (zygotic arrest 1)



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Purkinje Cell Markers

1. CD3 (Leu-4)
2. GABA-T
3. MAP2
4. OMP
5. P450scc
6. PCA-1/PCA-2
7. PEP-19
8. CaM-PDE (Calmodulin-dependent phosphodiesterase)
9. Calbindin (CaBP, 28-kDa calbindin-D, calcium binding protein Calbindin-D28K)
10. Cerebellin
11. cGMP-dependent protein kinase
12. PMCA (plasma membrane calcium pump)

Pyramidal Cell Markers

1. CaMK (calcium/calmodulin-dependent protein kinase II, CaMKII)
2. MAP2 (microtubule-associated protein 2)
3. MATH-2
4. SCIP
5. Tbr1

Squamous Cell Carcinoma Markers

- | | |
|--|---|
| <ol style="list-style-type: none">1. VEGF (Vascular endothelial growth factor)2. PAI-1 (plasminogen activator inhibitor-1)3. Metallopanstimulin (MPS-1)4. M-CSF ((macrophage colony-stimulating factor)5. Jab1 (Jun activation domain-binding protein 1)6. Insulin-like growth factor-I receptor (IGF-Ir)7. HGF (Hepatocyte growth factor)8. Glut1 (glucose transporter 1)9. beta- and gamma-Catenin10. Osteopontin (OPN)11. Glutathione12. P1613. p21 | <ol style="list-style-type: none">14. Bax15. Catenin16. CD4417. CD8018. p5319. p6320. Survivin21. Cyclin D122. Cytokeratin 123. Cytokeratin-124. MMP-825. MMP-926. E-cadherin |
|--|---|

Stem Cell Markers

- | | |
|--|--|
| <ol style="list-style-type: none">1. CD92. CD343. Endoglin4. Connexin 435. Flk-26. KDR7. p638. Telomerase9. Nestin10. Thy-111. Keratin 1912. SOX1 | <ol style="list-style-type: none">13. CD133 (Prominin-1)14. Fibroblast growth factor receptor-315. Interleukin-2 receptors16. Interleukin-3 receptor alpha chain17. Oct4 (Oct-4)18. Podocalyxin19. SOX220. Stem cell Antigen 1 and 2 (Sca-1 and Sca-2)21. Transcription factor Stat5 |
|--|--|

Spermatocyte Markers

1. 8D11
2. Acrosin Binding Protein (ACRBP)
3. GCNA1
4. Pgk-2
5. Proacrosin
6. SCP1/SCP2/SCP3 (Synaptonemal Complex Protein)



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Thymocyte Markers		Spermatozoa Cell Markers
1. CD1a	11. TAP (T cell-activating protein)	1. Amidase 2. CD46 3. Inhibin B 4. Protamine 1 and 2
2. CD2	12. Immature thymocyte antigen-1 (IMT-1)	
3. CD4	13. LFA-1 (lymphocyte function associated antigen-1) beta	
4. CD8	14. H-2	
5. CD25	15. Thy-1	
6. CD53	16. Thy-2	
7. CD69	17. IL-7	
8. CD71	18. T6 (OKT 6)	
9. TL3	19. T3 (OKT 3)	
10. Ly-1/Ly-2		
Synaptic (Synapse) Markers		Theca Cell Markers
1. Chromogranin A/Chromogranin C		1. Alkaline phosphatase (AP) 2. BMP-4 3. CYP17
2. Con A-binding glycoprotein		
3. D2-protein		
4. GAP-43 (Growth-Associated Protein-43)		
5. NCAM/N-CAM D2 (Neural cell adhesion molecule)		
6. p65		
7. Synaptin		
8. Synaptophysin		
9. Synaptoporin		
10. Vesicular glutamate transporters (VGLUT1 and VGLUT2)		
T Cell Markers		Stellate Cell Markers
1. CD1a	11. CD11b (Mac-1)	1. alpha-SMA (smooth muscle actin, alpha) 2. Desmin 3. FAP (Fibroblast Activation Protein) 4. GFAP 5. Reelin 6. S100 7. Synaptophysin 8. Vimentin 9. Vinculin
2. CD1d	12. CD25 (interleukin 2 receptor alpha)	
3. CD2	13. CD134 (OX40)	
4. CD3	14. CD150	
5. CD4	15. HLA-DR	
6. CD5	16. Ly-2	
7. CD7	17. TCR (T cell receptor)	
8. CD8	18. Thy-1 (CD90)	
9. CD38		
10. FOXP3		



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Langerhans Cell Markers		Pigment Cell Markers
1. ATPase	9. Acetylcholinesterase (AChE)	1. ETB
2. CD1a (Leu 6)	10. Fc gamma-receptor (FcR)	2. HMB-45
3. E-Cadherin	11. Langerin (CD207)	3. Mel1/Mel2
4. Fascin	12. MHC Class II	4. MelEM
5. HLA-DM	13. NA1/34	5. Mitf
6. KL-6	14. Neuron-Specific Enolase (NSE)	6. PNL2
7. MT1	15. S-100	7. S-100
8. OKT6	16. T6 (CD1)	8. Tyrosinase (T4)

Leydig Cell Markers	
1. 3 beta-HSD (3 -hydroxysteroid dehydrogenase, 3b-HSD)	9. Calretinin
2. 7-dehydrocholesterol reductase (7-DHCR)	10. Cyp17 and Cyp11a1
3. 11 beta-hydroxysteroid dehydrogenase	11. Esterase
4. IGF-1 (insulin like growth factor-1)	12. Inhibin-alpha
5. LRH-1 (liver receptor homolog-1)	13. INSL3 (Insulin-like factor 3)
6. Luteinizing Hormone (LH) receptor	14. Nestin
7. Neuron-Specific Enolase (NSE)	15. Thrombospondin 2 (TSP2)
8. STAR (steroidogenic acute regulatory protein)	16. Ley I-L (Leydig insulin-like gene)

Myoblast Markers		Motor Neuron Markers
1. Acetylcholinesterase	8. Myf-5	1. 1.ChAT
2. alpha- and beta-tropomyosin	9. MyoD	2. Chox10
3. CD56	10. Myogenin	3. En1
4. Desmin	11. Myosin	4. FGF1 or acidic FGF
5. Lactate Dehydrogenase	12. N-Cadherin	5. HB9
6. M-Cadherin	13. p21	6. Isl1
7. MRF4	14. Pax7	7. Isl2
	15. Titin	8. p75
		9. SMI32
		10. Zfh1



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Glial Cell Markers

Astrocyte/Astroglia Markers	General Glial Cell Markers
1. alpha Smooth Muscle Actin 2. GFAP 3. GLT-1 and GLAST 4. Glutamine Synthetase (GS) 5. Mab 6 6. S100 7. SC1	1. GD3 2. O4-antigen (O4) 3. RC1 4. Sox-1/Sox-2 5. Vimentin
Oligodendroglia/Oligodendrocyte Markers	
1. Microtubule-Associated Protein 4 (MAP-4) 2. Myelin-Oligodendrocyte Glycoprotein (MOG) 3. Transferrin Binding Protein (TfBP) 4. Carbonic Anhydrase II (CA II) 5. Amphoterin (P30, HMG-1) and RIP	6. NB3C4 7. Nestin 8. Olig2 9. CNPase 10. Galactocerebroside
Schwann Cell Markers	Microglia Markers
1. AN2 2. 1E8 (P0) 3. Herp 4. 217c (Ran-1) 5. S-100 protein 6. Beta 4 integrin 7. SCIP (also known as Tst-1 or Oct-6) 8. VEGF (Vascular endothelial growth factor) 9. Laminin 10. Schwann/2E	1. Cholera Toxin B subunit 2. Ferritin 3. Keratan sulphate (5D4) 4. RCA-1 (lectin)



Histogenotech research center antibodies list

Podocyte Markers

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|--------------------|---|
| 1. alpha-actinin-4 | 10. GLEPP1(Glomerular epithelial protein 1) |
| 2. CD10 | 11. T-/H-cadherin (CDH13) |
| 3. Ezrin | 12. Wilms' tumor-1 protein (WT-1) |
| 4. CD10 | 13. Podocin |
| 5. Desmin | 14. Podocalyxin (PC) |
| 6. FAT | 15. ZO-1 (zonula occludens-1) |
| 7. Nephrin | 16. Synaptopodin |
| 8. P-cadherin | 17. Vimentin |
| 9. VEGF | |

Stromal Cell Markers

1. Cadherin-11
2. Calretinin
3. CD10
4. Desmin
5. Fibroblast-Activation Protein (FAP)
6. Laminin gamma2 chain