



# Research Tools for Cancer Stem Cell Markers

Cancer stem cells (CSCs) are a rare subpopulation of tumor cells that have the capacity for self-renewal and multipotency. They can proliferate by dividing to produce more CSCs and differentiate into many cell types that construct the bulk of the tumor. Several markers identified for CSCs characterization are widely used for CSCs identification, isolation, and sorting along with cancer diagnosis, therapy, and prognosis.

Sino Biological has developed a broad collection of high-quality proteins and antibodies to support the research of CSC markers.

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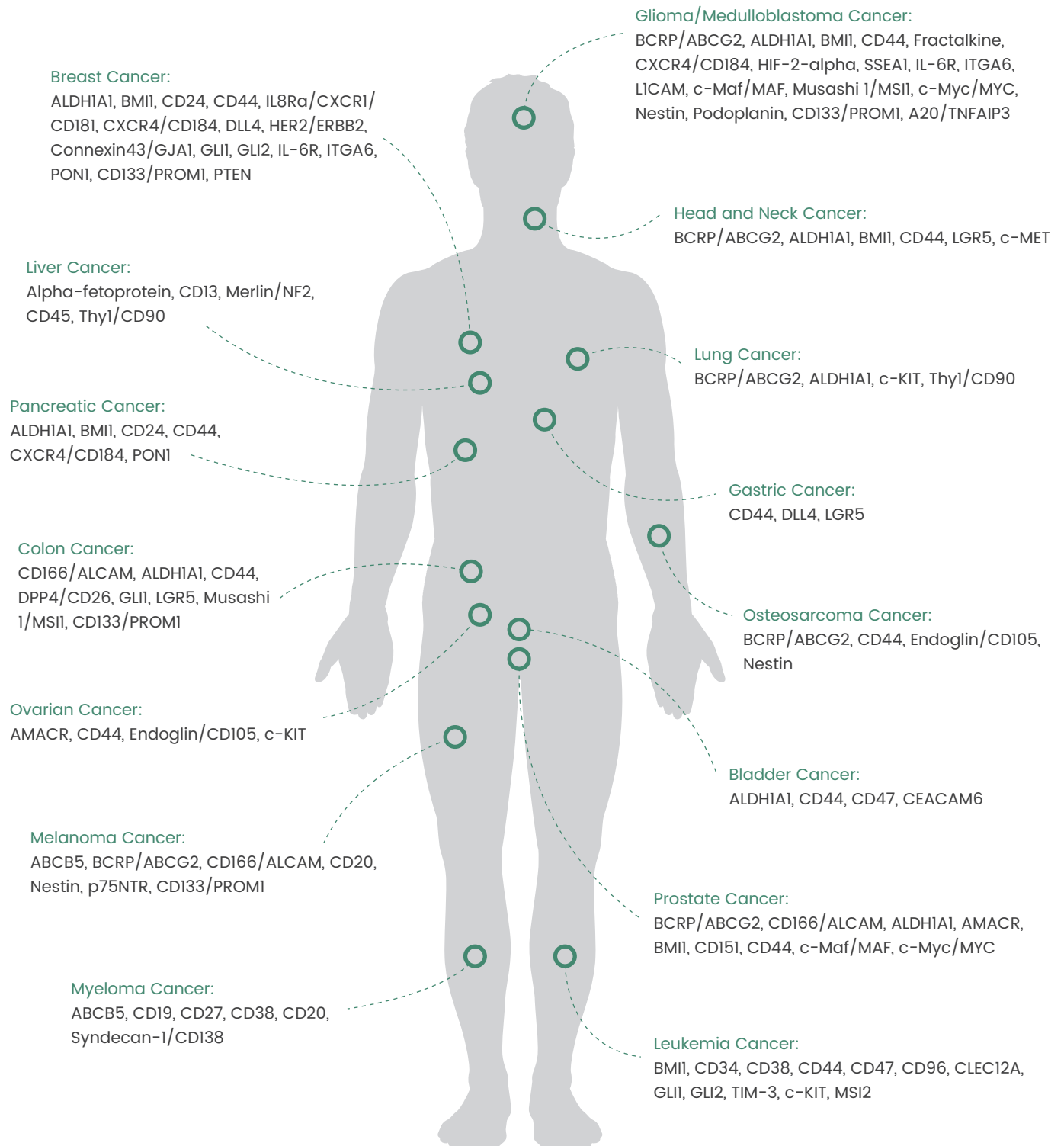
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# CSC Markers in Different Cancer Types

CSCs exist in a variety of cancer types. The development of therapeutic strategies targeting CSCs mainly relies on the use of malignancy-specific CSC markers to identify, enrich, and/or isolate CSCs. Research tools provided by Sino Biological have covered the majority of proteins and antibodies of CSC markers in different cancer types.

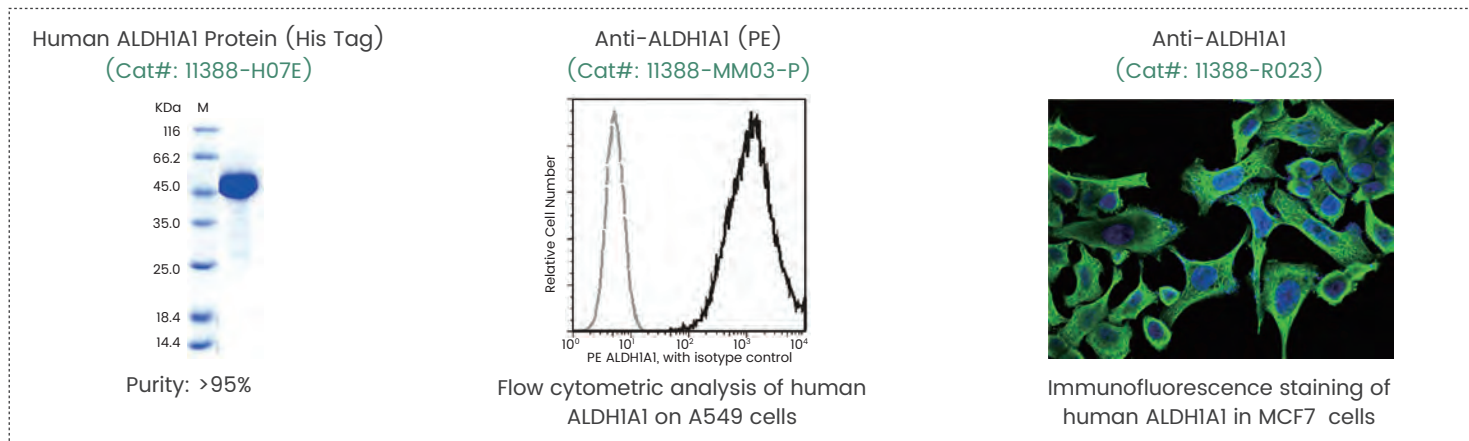


## Featured Products for CSC Markers (Partial)

Sino Biological provides various products for key CSC biomarkers to advance the research of CSC markers.

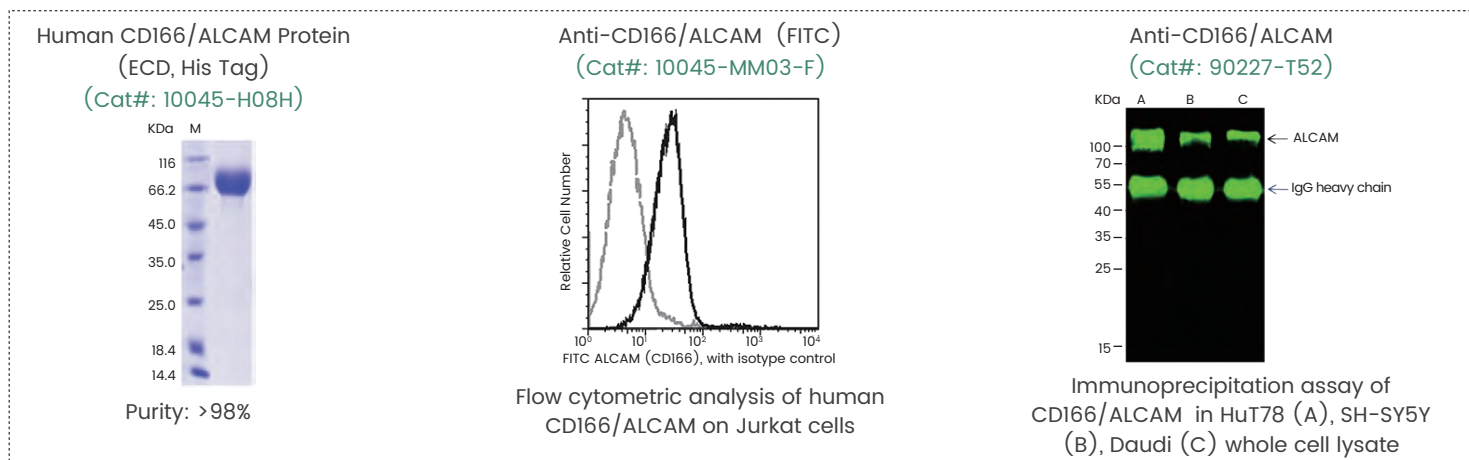
### ALDH1A1

ALDH1A1 expression is known to regulate CSC self-protection, differentiation, and population expansion. Overexpression of ALDH1A1 is widely observed in different cancer types, including bladder, breast, colon, head and neck, lung, pancreatic, and prostate.



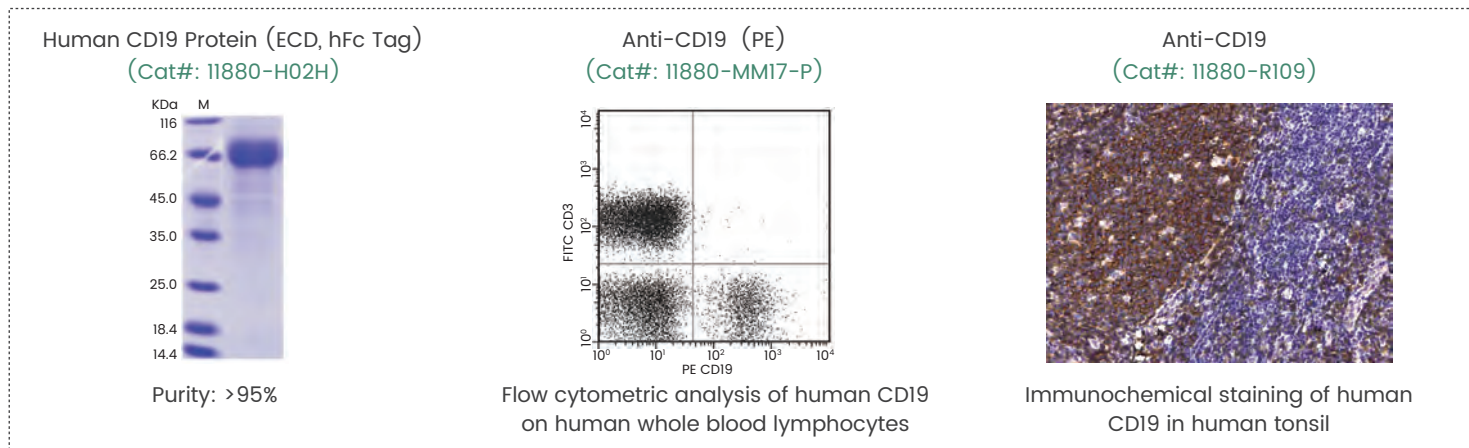
### CD166/ALCAM

CD166, also known as activated leukocyte cell adhesion molecule (ALCAM), is a type I transmembrane cell adhesion molecule belonging to the Ig superfamily. CD166 has been identified as a CSC surface marker for colon, melanoma, and prostate cancers.



### CD19

CD19 is a member of the Ig superfamily of proteins expressed on the surface of B cells at most stages of their development. CD19 serves as an ideal target for CAR-directed therapies because it is considered as one of multiple myeloma stem cell markers not expressed on hematopoietic stem cells.

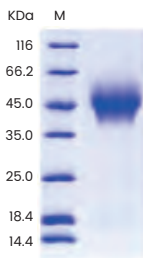




## CD44

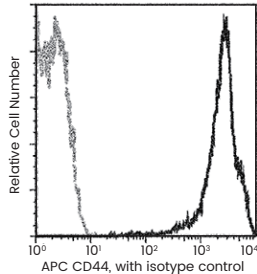
CD44 is a CSC marker expressed in solid and in hematological cancers. Its expression is associated with increased proliferation, self-renewal, and metastasis

Human CD44 Protein (His Tag)  
(Cat#: 12211-H08H)



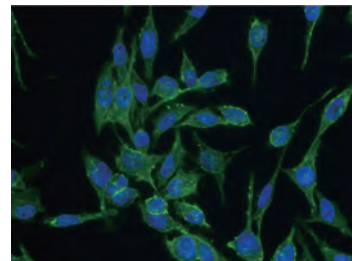
Purity: >95%

Anti-CD44 (APC)  
(Cat#: 12211-MM02-A)



Flow cytometric analysis of human CD44 on peripheral blood lymphocytes

Anti-CD44  
(Cat#: 12211-R001)

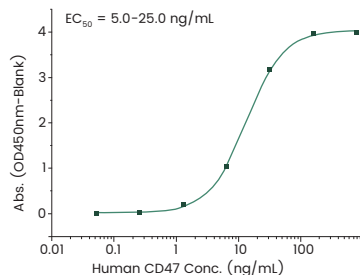


Immunofluorescence staining of human CD44 in HeLa cells

## CD47

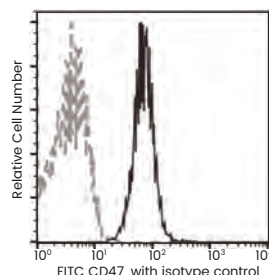
CD47, also known as integrin-associated protein, is a constitutively and ubiquitously expressed transmembrane receptor. CD47 is an adverse prognostic factor and therapeutic antibody target on human acute myeloid leukemia stem cells.

Human CD47 Protein (ECD, His Tag)  
(Cat#: 12283-H08H)



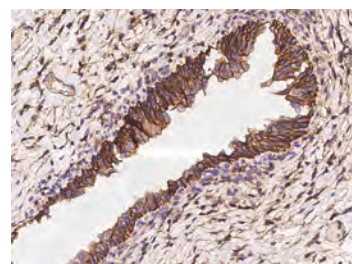
Binding ability in a functional ELISA, bind to human SIRP alpha

Anti-CD47 (FITC)  
(Cat#: 12283-MM07-F)



Flow cytometric analysis of human CD47 on human whole blood lymphocytes

Anti-CD47  
(Cat#: 12283-T26)

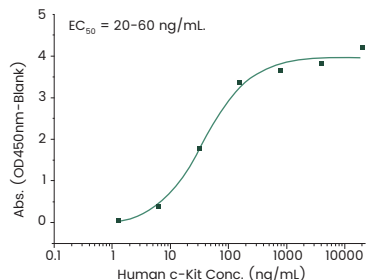


Immunochemical staining of human CD47 in human urinary bladder

## c-KIT

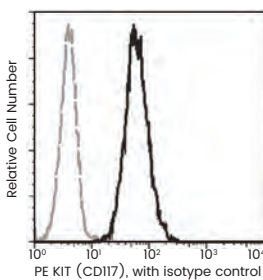
c-KIT, also known as CD117, is a type 3 transmembrane receptor for MGF. CD117 plays an important role in cell differentiation and survival, particularly in its impact on CSCs.

Human c-KIT Protein (hFc Tag)  
(Cat#: 11996-H02H)



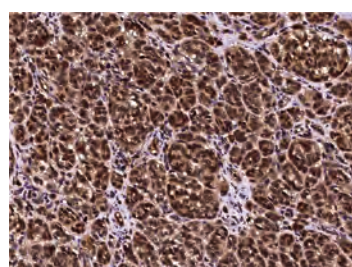
Binding ability in a functional ELISA, bind to human SCF

Anti-c-KIT (PE)  
(Cat#: 11996-R007-P)



Flow cytometric analysis of human c-KIT on TF-1 cells

Anti-c-KIT  
(Cat#: 11996-R351)

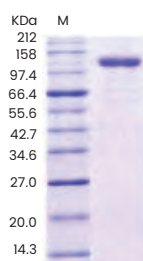


Immunochemical staining of human c-KIT in human melanoma

## Endoglin/CD105

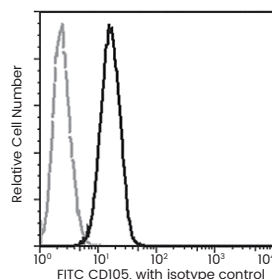
Endoglin, also known as CD105, is a type I homodimeric transmembrane glycoprotein. It was identified as a marker of Clear Cell Renal Cell Carcinoma which involved in the epithelial mesenchymal transition and stem cell traits.

Human Endoglin/CD105 Protein  
(hFc Tag)  
(Cat#: 10149-H02H)



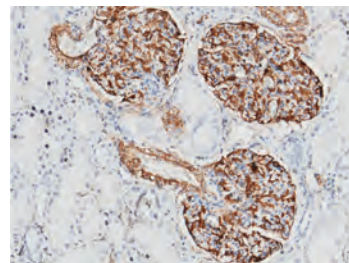
Purity: >95%

Anti-Endoglin/CD105 (FITC)  
(Cat#: 10149-MM13-F)



Flow cytometric analysis of human  
Endoglin/CD105 in HeLa cells

Anti-Endoglin/CD105  
(Cat#: 100088-RP02)

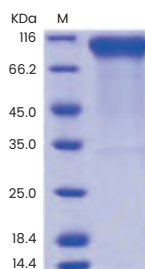


Immunohistochemical staining of human  
Endoglin/CD105 in human kidney

## HER2/ERBB2

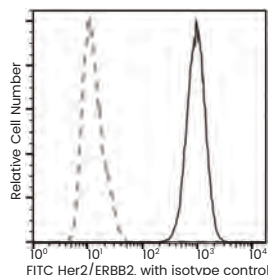
Human epidermal growth factor receptor 2 (HER2), also known as ERBB2 and CD340, is a type I membrane glycoprotein and belongs to the epidermal growth factor (EGF) receptor family. HER2 is an important regulator of the CSC population in HER2+ breast cancers.

Human HER2/ERBB2 Protein (ECD)  
(Cat#: 10004-HCCH)



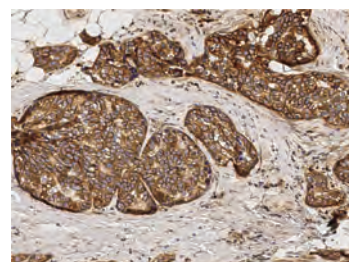
Purity: >95%

Anti-HER2/ERBB2 (FITC)  
(Cat#: 10004-MM07T-F)



Flow cytometric analysis of human  
Her2/ERBB2 on SKBR3

Anti-HER2/ERBB2  
(Cat#: 10004-T60)

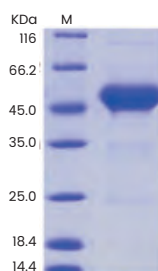


Immunohistochemical staining of human  
Her2/ERBB2 in human breast carcinoma

## Thy1/CD90

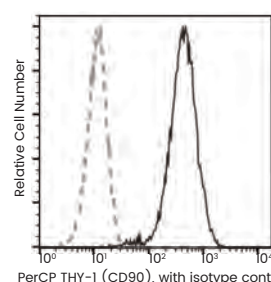
Thy1/CD90, a membrane-associated glycoprotein, is one of CSC markers in various malignancies, which induces tumorigenic activity. Blocking CD90 activity with anti-CD90 monoclonal antibodies enhanced anti-tumor effects.

Human Thy1/CD90 Protein (hFc Tag)  
(Cat#: 16897-H02H)



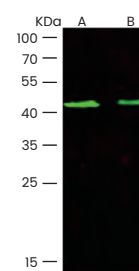
Purity: >95%

Anti- Thy1/CD90 (PerCP)  
(Cat#: 16897-MM10-C)



Flow cytometric analysis of human  
Thy1/CD90 on MSC cells

Anti- Thy1/CD90  
(Cat#: 100673-T32)



Western Blot assay of Thy1/CD90 in rat brain  
tissue lysate (A) and PC12 membrane lysate (B)

## More Products for CSC Markers (Partial)

Molecule	Human Protein	Anti-Human Antigen
A20/TNFAIP3		100939-T34 (WB, ICC/IF)
ABCB5		100692-T32 (WB)
Alpha-fetoprotein	12177-H08H	12177-MM35T (FCM), 12177-T52 (WB, ELISA, IP), 12177-MM27 (ICC/IF)
BCRP/ABCG2		100341-T36 (WB, IP)
BMI1		100299-R116 (IHC), 100299-T10 (ICC/IF, IHC)
CD13	10051-H08H	10051-T60 (WB, ELISA, IHC, IP), 10051-R011 (ICC/IF)
CD133/PROM1		108990-T08 (IHC), 101955-T32 (WB)
CD151		100567-T08 (IHC), 200150-T32 (WB)
CD20	11007-H34E	11007-T60 (WB, ELISA, IHC, IP), 11007-R001-A (FCM), 310340-T10 (ICC/IF, IHC)
CD24	11030-H02H	
CD27	10039-H31H	10039-MM09-A (FCM), 10039-R150 (WB, ELISA), 10039-T24 (ELISA, IHC)
CD34	10103-H08H	10103-R009 (ELISA), 10103-MM17 (IHC), 68035-XM01-F (FCM)
CD38	10818-H02H	10818-R017 (IHC), 10818-T60 (WB, ELISA, IHC, IP), 10818-MM27-A (FCM)
CD45	10086-H02H	10086-MM05 (ELISA, FCM, ICC/IF), 200778-T44 (WB, IHC, IP)
CD96	11202-H08H	11202-RP01 (ELISA), 11202-RP02 (ELISA),
CEACAM6	10823-H08H	10823-R408 (ELISA, FCM, ICC/IF), 10823-T24 (ELISA, IHC)
CLEC12A	11896-H07H	200693-T08 (IHC)
c-MET	10692-H02H	10692-R271 (FCM), 10692-T16 (ELISA), 100352-T32 (WB)
c-Myc/MYC		100427-T32 (WB)
Connexin43/GJA1		100662-T10 (ICC/IF, IHC), 100246-T40 (WB, IHC)
CXCR4/CD184		310268-T36 (WB, IP)
DLL4	10171-H02H	10171-RP01 (ELISA), 10171-R003-H (ELISA)
DPP4/CD26	10688-H08H	102004-T08 (IHC), 10688-MM05 (FCM)
Fractalkine	10636-H08H	10636-R409 (ELISA, IHC), 10636-RP03 (ELISA, IHC)
GLI1		101156-T10 (ICC/IF, IHC)
IL-6R	10398-H02H	10398-RP02 (ELISA), 10398-MM08 (Neutralization), 10398-R502 (FCM)
IL8Ra/CXCR1/CD181		201528-T42 (WB, ICC/IF, IHC)
ITGA6		100497-T10 (ICC/IF, IHC), 310402-T32 (WB)
LICAM	10140-H08H	10140-R014 (ELISA, FCM, ICC/IF, IHC), 10140-MM03 (FCM)
LGR5		100687-T04 (IP)
Merlin/NF2		100689-T40 (WB, IHC)
MSI1		100587-T10 (ICC/IF, IHC), 100587-T08 (IHC)
MSI2		101402-T08 (IHC)
Nestin		103270-MM11 (WB, FCM, ICC/IF, IHC), 106970-T44 (WB, IHC, IP)
p75NTR	13184-H02H	101003-T36 (WB, IP), 13184-R001 (ICC/IF), 13184-T16 (ELISA)
Podoplanin	11065-H03H	11065-T52 (WB, ELISA, IP)
PONI		100614-T44 (WB, IHC, IP)
PTEN		100729-T08 (IHC)
SSEA1		101323-T08 (IHC)
Syndecan-1/CD138	11429-H08H	11429-R017-F (FCM), 100620-T32 (WB), 11429-T24 (ELISA, IHC)
TIM-3	10390-H38H	10390-MM04 (ELISA), 10390-RP01 (WB, ELISA)

For more products, please visit <https://www.sinobiological.com/areas/stem-cells/cancer-stem-cells>



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