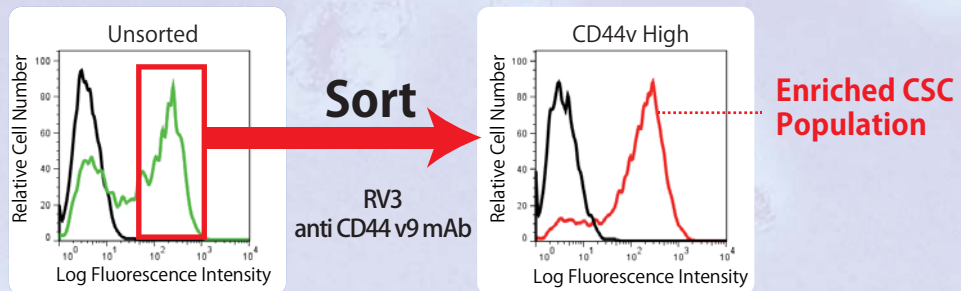


# Cancer Stem Cell Enrichment Antibodies! CD 44 v mAb

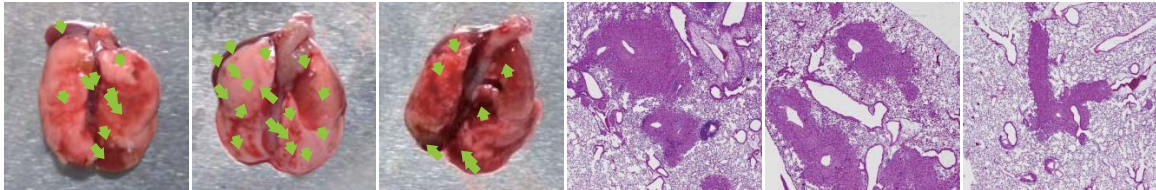
Powerful tools for *in vivo* CSC drug discovery and basic cancer research

Variant isoforms of CD44 (CD44v) are preferentially expressed on cancer stem cells (CSC). These highly specific **CD44v monoclonal antibodies** are well characterized and highly recommended for measuring CD44v expression by flow cytometry and for enrichment of CSC populations by cell sorting.

*In vivo* Lung metastasis assay study showing the high efficiency of CD44 v9-High cell populations sorted from the human pancreatic cancer cell line AsPC-1 to colonize mouse lung.



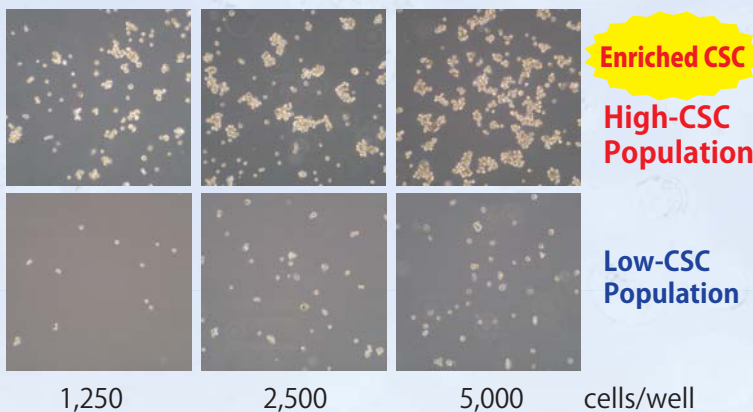
High metastasis formation in a CSC-dependent manner



Green arrows indicate readily observable metastatic colonies following injection of sorted CD44 v9-High cells into mice. H&E staining is shown at right.

The high efficiency of metastasis (colony) formation by CD44 v9-High cells presents an opportunity to assay the effectiveness of new anti-CSC therapeutic strategies.

*In vitro* Sphere formation assays with CD44 v9-sorted human PC3 prostate cancer cells



Efficient sphere (tumor) formation by CD44 v9-High cells.

The high efficiency of sphere formation by CD44 v9-High cells presents an opportunity to assay the effectiveness of new anti-CSC therapeutic strategies.

[www.cosmobio.com](http://www.cosmobio.com)



CD44v

## Order Information

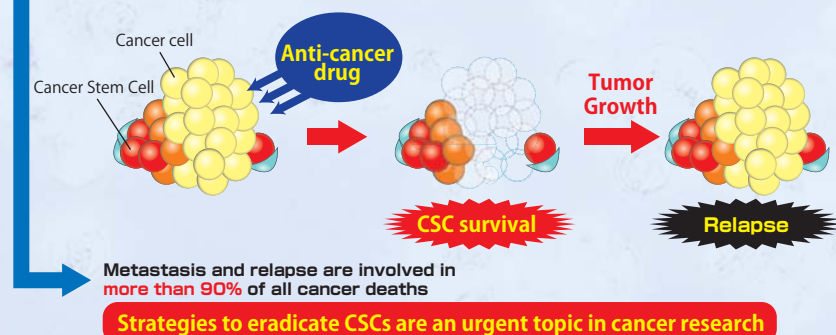
Description	Host	Clone	Application	Cat. No.	Quantity
Anti Human CD44 v9	Rat	RV3	FCM/ IHC/ IF	CAC-LKG-M003	50 µg
			/ WB/ IP/ ELISA	CAC-LKG-M001	100 µg
Anti Mouse CD44 v10-e16	Rat	RM1	FCM	CAC-LKG-M002	100 µg



# Cancer Stem Cell — CD 44 v mAb — Enrichment Antibodies!

## Cancer Stem Cell [CSC] Characteristics

- Minor population in tumor : 0.1 - a few percent
- Self-renewing; infinite proliferative potential.
- Enhanced resistance to drugs, radiation, cell stress.
- Tumorigenic; give rise to other cell types in tumor.
- Associated with **metastasis** and **relapse**.

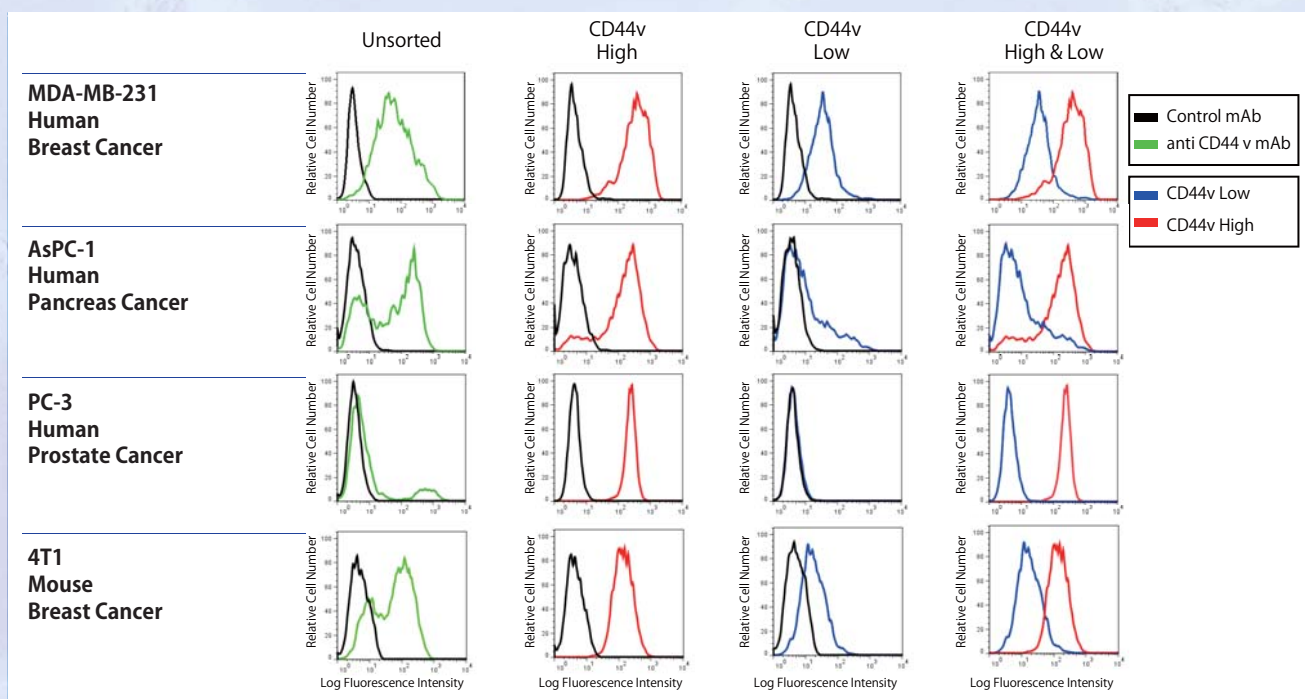


## Cancer Stem Cell Markers

Type of cancer	CSC markers
Colon cancer	CD44+ CD133+
Breast cancer	CD44+ CD24-/low
Gastric cancer	CD44+
Pancreatic cancer	CD44+ CD24+ ESA+
Hepatic cancer	CD133+
Prostate cancer	CD44+
Metastatic melanoma	CD20+
Head and neck cancer	CD44+
Brain tumor	CD133+
Acute myeloid leukemia	CD34+ CD38-

## Flow Cytometry and Cell Sorting with Anti CD44 v9 (RV3) and CD44 v10-e16 (RM1) mAb

These well characterized CD44v monoclonal antibodies are highly recommended for measuring CD44v expression by flow cytometry and for enrichment of CSC populations by cell sorting.



### References

1. Nagano O., et al., *Oncogene*. 2013 Jan 21, 1-8.
2. Tsugawa H., et al., *Cell Host Microbe*. 2012 Dec 13; 12 (6): 764-77.
3. Yae T., et al., *Nat Commun*. 2012 Jun 6; 3: 883.
4. Ishimoto T., et al., *Cancer Cell*. 2011 Mar 8; 19 (3): 387-400.
5. Lo M, Wang YZ., et al., *J Cell Physiol*. 2008 Jun; 215 (3): 593-602.
6. Li C, Heidt DG., et al., *Cancer Res*. 2007 Feb 1; 67 (3): 1030-7.
7. Dalerba P., et al., *Proc Natl Acad Sci USA*. 2007 Jun 12; 104 (24): 10158-63.
8. Prince ME., et al., *Proc Natl Acad Sci USA*. 2007 Jan 16; 104 (3): 973-8.
9. Anne T. Collins., et al., *Cancer Res*. 2005 Dec 1; 65 (23): 10946-51.
10. Tanabe KK., et al., *Lancet*. 1993 Mar 20; 341 (8847): 725-6.



COSMO BIO Co., LTD.

TOYO EKIMAE BLDG, 2-20, TOYO 2-CHOME,  
KOTO-KU, TOKYO 135-0016, JAPAN  
TEL : (81)3-5632-9617  
FAX : (81)3-5632-9618  
e-mail : export@cosmobio.co.jp  
URL : www.cosmobio.com

