

# SSEA-3

**SSEA-3** (stage specific embryonic antigen 3), one of the sphingoglycolipid species, is expressed on the surface of the Muse cells as well as human EC cells, ES cells and iPS and has been used as a pluripotent/embryonic marker.

Muse cells are naturally existing pluripotent stem cells which repair the structure and function of damaged organs by selectively migrating and integrating to damaged tissue and spontaneously differentiating into tissue compatible cells. They can be isolated from mesenchymal tissue sources or cultured mesenchymal cells as double positive cells of CD105, a mesenchymal marker, and SSEA-3. Anti-SSEA-3 (15B11) Mouse IgG MoAb is IgG subclass (IgG2b) monoclonal antibody that specifically detects SSEA-3.

## Antibody

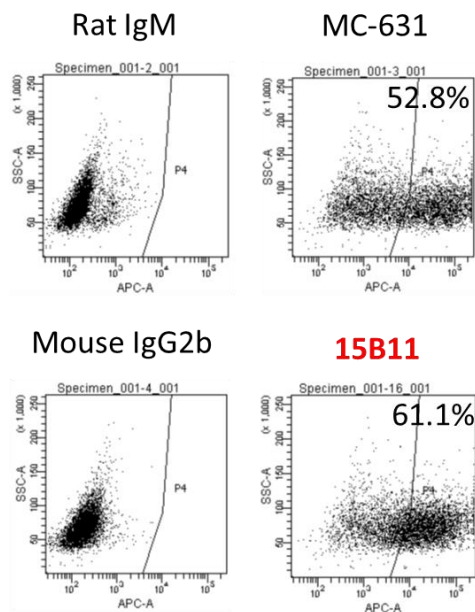
### #10431 Anti-SSEA-3 (15B11) Mouse IgG MoAb

- \* Volume : 100µG, 10µG
- \* Sample Type: Human, Mouse
- \* Specificity : Reacts with human and mouse SSEA-3  
<0.4%cross-reactivity to SSEA-4 and SSEA-3b
- \* Application : FACS, IHC, IF

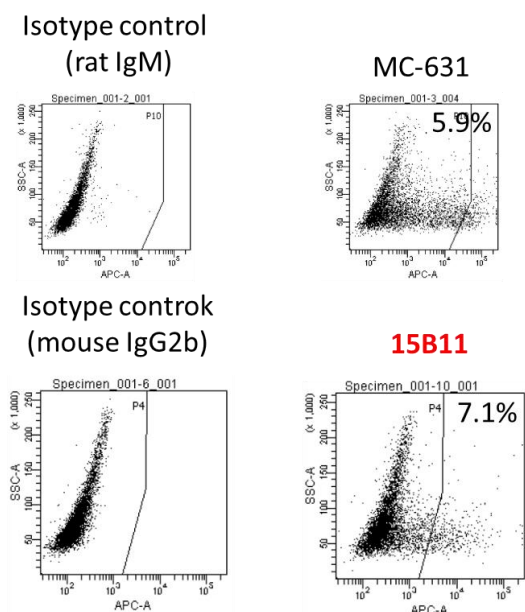
## Detection of SSEA-3 positive cells by FACS analysis

### NTERA-2

( pluripotent human embryonal carcinoma cell line )



### Human mesenchymal stem cells



## References:

Data kindly provided by Stem Cell Biology and Histology, Tohoku University School of Medicine.

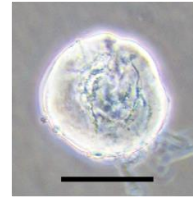
[Unique multipotent cells in adult human mesenchymal cell populations. Kuroda et al. Proc Natl Acad Sci U S A. 2010 May 11;107\(19\):8639-43.](#)

[Multilineage-differentiating stress-enduring \(Muse\) cells are a primary source of induced pluripotent stem cells in human fibroblasts. Wakao et al., Proc Natl Acad Sci U S A. 2011 Jun 14;108\(24\):9875-80.](#)

[Isolation, culture and evaluation of multilineage-differentiating stress-enduring \(Muse\) cells. Kuroda et al. Nat Protoc. 2013;8\(7\):1391-415.](#)

The product cannot be used for diagnostic nor any medical purpose.

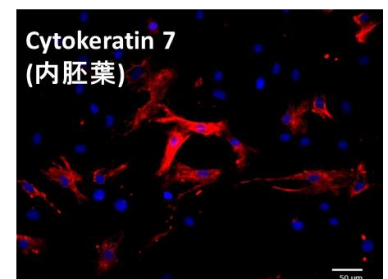
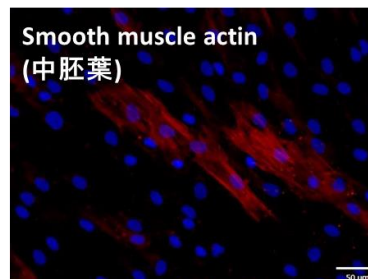
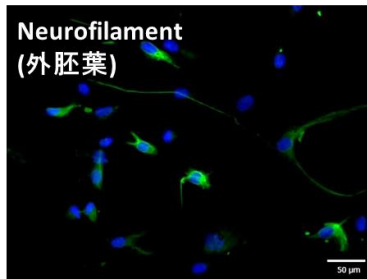
## Application for Isolation of Muse cells



Cultured cell cluster from **15B11**-positive single cell

Bar: 50  $\mu$ m

After 10 days culture on gelatin coated dish,  
Cell cluster differentiated into three germ layers.



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## IHC Example using Mouse Tissue

### #10431 Anti-SSEA-3 (15B11) Mouse IgG MoAb

**2<sup>nd</sup> Ab**  
**(Mouse IgG)**

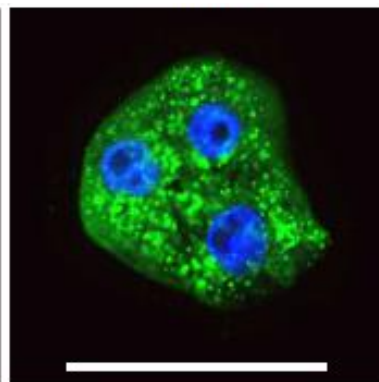
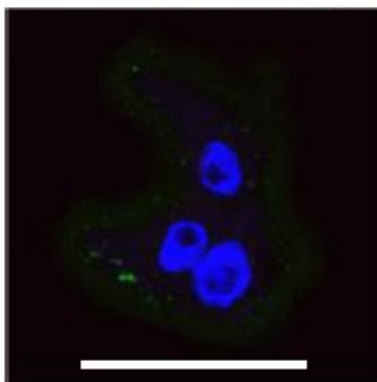
**15B11**

#### Antibody

Mouse anti-SSEA-3 antibody (15B11, 5 $\mu$ g/mL)  
Donkey anti-mouse-Alexa488  
(Jackson ImmunoResearch, 715-546-150, 1:500)

#### Procedure

1. Air drying (4°C, 30min)
2. Wash with PBS (RT, 5min x 2)
3. Incubate with Blocking Solution (RT, 30 min)
4. Wash with PBS (RT, 5min x 3)
5. Incubate with Primary Antibody (4°C, O/N)
6. Wash with PBS (RT, 5 min x 3)
7. Incubate with Secondary Ab (RT, 1hr)
8. Wash with PBS (RT, 5min x 3)
9. Mounting



Expression of SSEA-3 (8-cell stage mouse embryo)

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