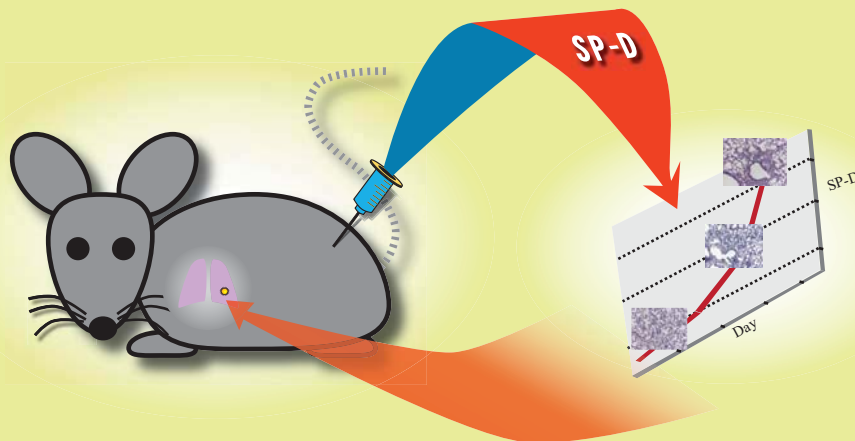


Useful for respiratory tract research such as lung disorders!

# Rat/Mouse Surfactant Protein D ELISA Kit

Based on **sandwich ELISA** which can measure the concentration of rat/mouse **surfactant protein D (SP-D)** using two monoclonal antibodies.



SP-D plays an important role in natural immunity of living body defense and lipid metabolism as a physiology. Human serum SP-D shows a high value in interstitial pneumonitis patients, and reported that SP-D is useful as a marker for diagnoses of interstitial pneumonitis. Therefore, it is being widely used for serum examination of respiratory field.

- ★ **High Sensitivity:** The measurement range is 0.47 - 30 ng/mL.
- ★ **Quick Assay:** The reaction time is within 4 hours.
- ★ The concentration of SP-D in **serum** or **bronchoalveolar lavage fluid (BALF)** can be measured.

## Kit Components

1. Antibody Coated Plate: 96 microwell plate ..... 8wells/12 strips
2. Rat SP-D Standard 1 (0.47 ng/mL)..... 0.5 mL
3. Rat SP-D Standard 2 (1.88 ng/mL)..... 0.5 mL
4. Rat SP-D Standard 3 (7.5 ng/mL)..... 0.5 mL
5. Rat SP-D Standard 4 (30 ng/mL)..... 0.5 mL
6. Sample Diluent ..... 50 mL
7. Concentrated Washing Solution ..... 50 mL
8. Enzyme Conjugate ..... 0.15 mL
9. Enzyme Conjugate Diluent ..... 15 mL
10. Color Developing Reagent A ..... 0.5 mL
11. Color Developing Reagent B ..... 11 mL
12. Stopping Solution ..... 11 mL

## Assay Procedure

1. Add 100  $\mu$ L of standard and samples
2. Incubate at 20 - 30°C for 2 hours
3. Wash plate 3 times
4. Add 100  $\mu$ L of HRP conj. antibody solution
5. Incubate at 20 - 30°C for 1 hour
6. Wash plate 3 times
7. Add 100  $\mu$ L of color reagent
8. Incubate at 20 - 30°C for 15 min.
9. Add 100  $\mu$ L of stop solution

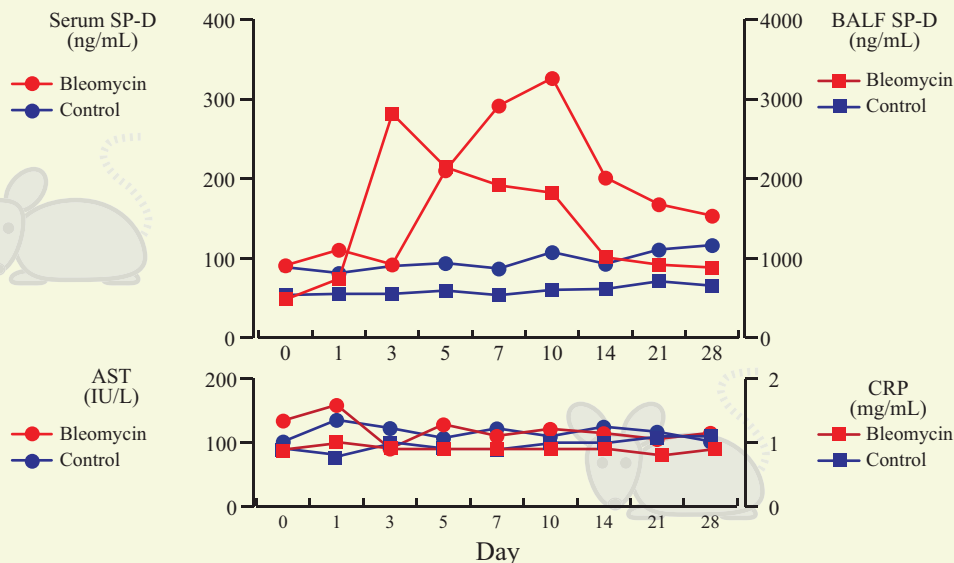
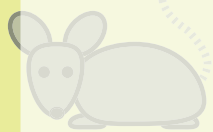
## References

- 1) Murata M. *et al.* : *Exp Lung Res*, 2010 Oct ; **36**(8): 463-8
- 2) Murata M. *et al.* : *J Toxicol Sci.* Vol. **35**: Supplement P.S208

## Ordering Information

Description	Cat. No.	Quantity
<b>Rat/Mouse Surfactant Protein D ELISA Kit</b>	YMS-80072-EX	1 kit

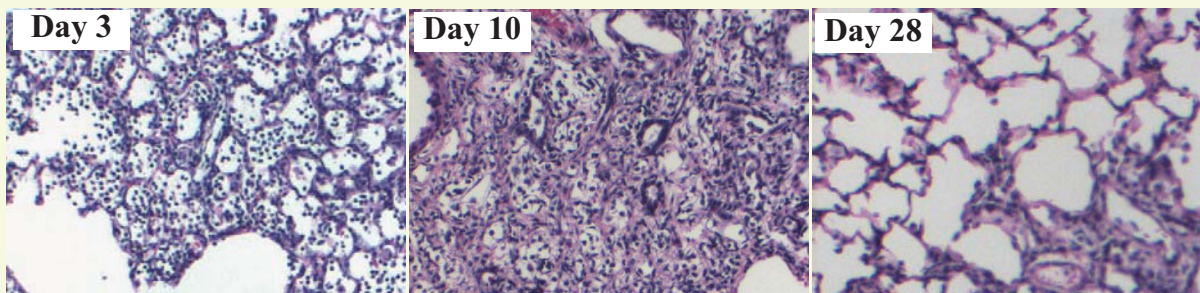
## Serum SP-D and BALF Concentrations of Bleomycin-treated Wistar Rats



Bleomycin (1 mg/kg) was administered intratracheally to male Wistar Rats (8 weeks-old). Serum and bronchoalveolar lavage fluid (BALF) samples were collected from day 0 to 28 after bleomycin treatment. Serum SP-D concentrations of bleomycin-treated rats were elevated from day 5 and peaked on day 10, then gradually decreased until day 28. Serum samples and BALF samples in control rats were not elevated. In the case of serum aspartate aminotransferase and C-reactive protein, there was no significant difference between bleomycin-treated rats and control rats.

## Histological Evaluation

Lungs prepared from normal rats and bleomycin-treated rats were fixed in 20% formalin solution and embedded in paraffin. These samples were stained with hematoxylin and eosin for histological evaluation. Inflammatory cell infiltration and pulmonary edema were observed in the cell wall after day 3. On day 10 when serum SP-D concentration of bleomycin-treated rats were peaked, the density of inflammatory cell infiltration was the highest of other points and alveolar collapse was recognized. After day 28, SP-D concentration of serum and BALF were decreased and inflammatory cell infiltration and alveolar collapse were improved. These results showed that concentration of serum SP-D in bleomycin-treated rats corresponds with inflammation in lung.



Enlarge an image of x 100, H&E.

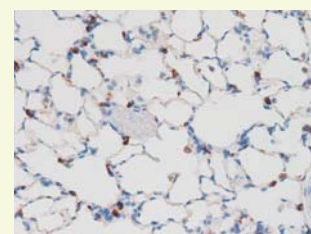
Editorial supervisor : Hiroki Takahashi, Sapporo Medical University School of Medicine  
 Note: all date shown in this leaflet is the results of experiment by YAMASA CORPORATION.

## Related Products

Monoclonal Antibodies for Rat Surfactant Protein D (SP-D)

Description	Clone	Cat. No.	Quantity
<b>Anti Surfactant Protein D</b>	12A2	YMS-80073	0.2 mL
<b>Anti Surfactant Protein D</b>	5F4	YMS-80075	0.2 mL

- References 1) Murata M. *et al.* : *Exp Lung Res.* 2010 Oct ; **36**(8): 463-8  
 2) Murata M. *et al.* : *J Toxicol Sci.* Vol. **35**: Supplement, P. S208



Immunohistochemistry of lung tissue from normal rat using YMS-80075, x40

For research use only. Not for diagnostic use.



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