# SMP30 (Senescence Marker Protein 30)
# Regucalcin
# Gluconolactonase (GNL)
# WesternBlot・ImmunoStain Kit

**Catalog Number: RDIK01-EX**

## Kit component

| | |
|---|---|
| Antibody : | Rabbit anti SMP30・GNL antibody 0.1 mL |
| | 10 mM Tris (pH 7.4), 0.14 M NaCl |
| | This kit does not contain $NaN_3$ |
| Specimen : | SMP30・GNL Knockout Mouse Liver 2 slides |
| | Wild type Mouse Liver 2 slides |
| Tissue extract : | SMP30・GNL Knockout Mouse Liver 30 μL |
| | (Protein concentration 0.4 mg/mL) |
| | Wild type Mouse Liver 30 μL |
| | (Protein concentration 0.4 mg/mL) |
| Storage and Stability : | -20 ℃, 2 years |

【Antibody】

SMP30 (Senescence Marker Protein 30) IgG

Gluconolactonase (GNL) IgG

Regucalcin IgG

★ SMP30, Gluconolactonase and Regucalcin are all identical protein.

Rabbit Polyclonal Antibody (Purified IgG Fraction)

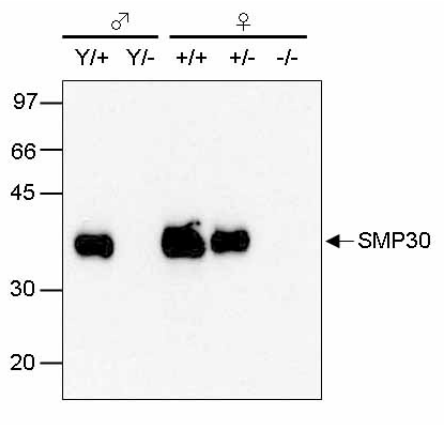
| | |
|---|---|
| Volume : | 0.1 mL |
| Antigen : | Rat SMP30 purified from rat liver, Molecular weight 34 kDa |
| Host : | Rabbit |
| Supplied As : | IgG fraction purified from rabbit serum. |
| | Prepared in 10 mM Tris (pH 7.4), 0.14 M NaCl. |
| Storage and Stability : | -20 ℃, 2 years |
| Tested applications : | • Immunofluorescence (1:100-1:500 dilution) |
| | • immunohistochemistry (1:100-1:500 dilution) |
| | • Western Blot (1:1,000-1:3,000 dilution) |
| Cross Reactivity : | Cross reacts with Human, Mouse and Rat SMP30. |
| | Not yet tested in other species. |

## 【Sample Preparation for Western blot】

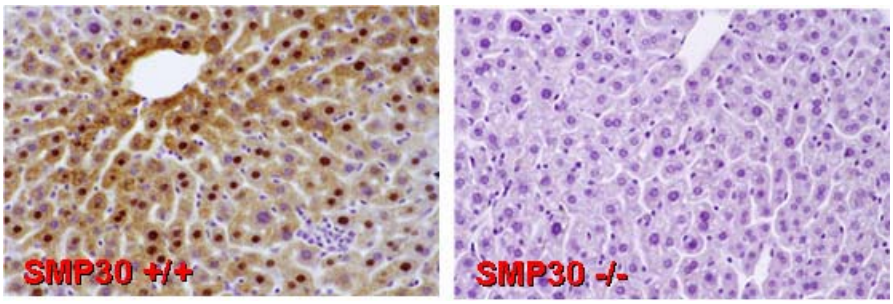
SMP30・GNL Knockout Mouse Liver　30 μL (Protein concentration 0.4 mg/mL)
Wild type Mouse Liver　30 μL (Protein concentration 0.4 mg/mL)

1. Add 30 μl SDS-PAGE Lysis Buffer.
2. Boil at 95ºC for 5 minutes and cool on ice.
3. Centrifuge at 10,000 rpm for 5 minutes and transfer the supernatant to a fresh tube.
4. Load the sample 10 μL (Protein 2 μg) per lane.

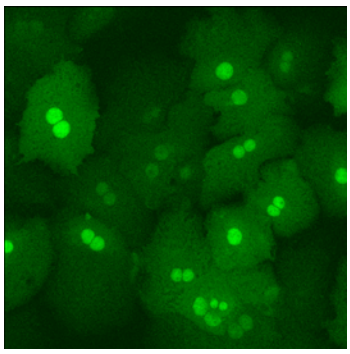
2X SDS-PAGE Lysis Buffer
125 mM Tris-HCl, pH 6.8
4% SDS
10% 2-mercaptoethanol
20% glycerol
0.01% bromophenol blue (BPB)




**[Western Blot Analysis]**
Each lanes：Mouse Liver Extract
• Wild type Mouse：SMP30Y/+ and SMP30+/+
• SMP30 Knockout Mouse：SMP30Y/- and SMP30-/-
• Heterozygous Mouse：SMP30+/-
SMP30・GNL antibody at 1:1,000 dilution used.




**[Immunohistochemical staining]**
Mouse liver stained with SMP30・GNL antibody at 1:300 dilution and developed by 3,3'-diaminobenzidine. Nucleus and cytoplasm of wild type (SMP30+/+) mice stained, but not stained in liver from SMP30 knockout (SMP30-/-) mice.



**[Immunofluorescence staining]**

Primary cultured mouse hepatocytes stained with SMP30・GNL antibody at 1:200 dilution. Nucleus and cytoplasm stained in green.

**References :**

1. Ishigami, A. et al., Senescence marker protein-30 knockout mouse liver are highly susceptible to TNF-alpha- and Fas-mediated apoptosis. *Am. J. Pathol.* 161 1273-1281 (2002)
2. Ishigami, A. et al., Nuclear localization of senescence marker protein-30 (SMP30) in cultured mouse hepatocytes and its homology to RNA polymerase. *Biosci. Biotechnol. Biochem.* 67 158-160 (2003)
3. Kondo, Y. et al., Senescence Marker Protein 30 Functions as Gluconolactonase in L-Ascorbic Acid Biosynthesis and Its Knockout Mice Are Prone to Scurvy. *Proc. Nat. Acad. Sci. USA* 103 5723-5728 (2006)
4. Sato, T. et al., Senescence Marker Protein-30 Protects Mice Lungs from Oxidative Stress, Aging and Smoking. *Am. J. Respir. Crit. Care Med.* 174 530-537 (2006)

***For Research Use Only***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