



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

Catalog Number: R01K01-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 NaN₃

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 °C, 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 °C, 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 μ L (Protein concentration 0.4 mg/mL)

Wild type Mouse Liver 30 μ L (Protein concentration 0.4 mg/mL)

1. Add 30 μ L SDS-PAGE Lysis Buffer.
2. Boil at 95°C 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 μ L (Protein 2 μ g) per lane.

2X SDS-PAGE Lysis Buffer

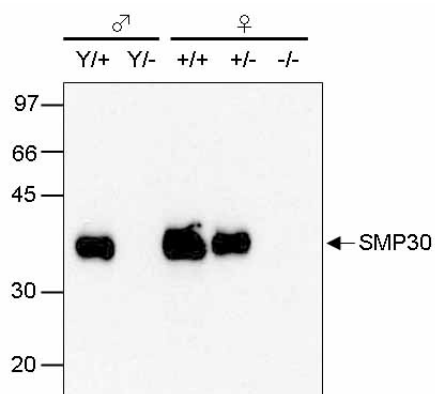
125 mM Tris-HCl, pH 6.8

4% SDS

10% 2-mercaptoethanol

20% glycerol

0.01% bromophenol blue (BPB)

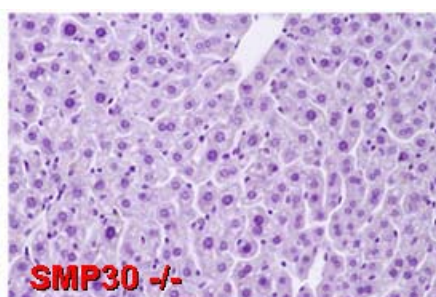
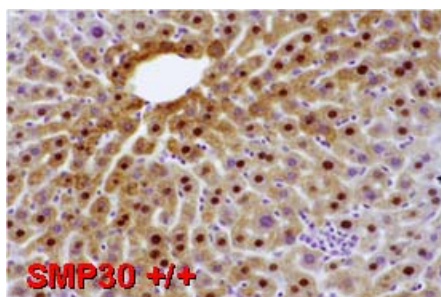


【Western Blot Analysis】

Each lanes : Mouse Liver Extract

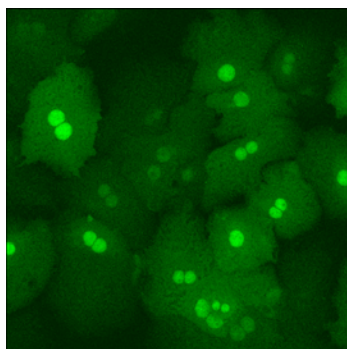
- Wild type Mouse : SMP30Y/+ and SMP30+/+
- SMP30 Knockout Mouse : SMP30Y/- and SMP30-/-
- Heterozygous Mouse : SMP30+/-

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)

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