

# Anti-Gemin 2 Antibody [JE33-32]

HA722428



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Cell, FC, IP
<b>Molecular Wt:</b>	Predicted band size: 32 kDa
<b>Clone number:</b>	JE33-32

**Description:** Gem-associated protein 2 (GEMIN2), also called survival of motor neuron protein-interacting protein 1 (SIP1), is a protein that in humans is encoded by the GEMIN2 gene. This gene encodes one of the proteins found in the SMN complex, which consists of several gemin proteins and the protein known as the survival of motor neuron protein. The SMN complex is localized to a subnuclear compartment called gems (gemini of coiled bodies) and is required for assembly of spliceosomal snRNPs and for pre-mRNA splicing. This protein interacts directly with the survival of motor neuron protein and it is required for formation of the SMN complex. A knockout mouse targeting the mouse homolog of this gene exhibited disrupted snRNP assembly and motor neuron degeneration.

**Immunogen:** Synthetic peptide within Human Gemin 2 aa 1-100.

**Positive control:** HeLa cell lysate, HepG2 cell lysate, K-562 cell lysate, mouse testis tissue lysate, rat testis tissue lysate, HeLa.

**Subcellular location:** Nucleus, gem, Cytoplasm.

**Database links:** SwissProt: O14893 Human | Q9CQQ4 Mouse | Q9QZP1 Rat

**Recommended Dilutions:**

<b>WB</b>	1:1,000
<b>IF-Cell</b>	1:100
<b>FC</b>	1:1,000
<b>IP</b>	1-2µg/sample

**Storage Buffer:** 1\*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

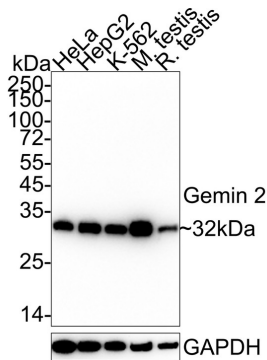
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## Images

**Fig1:** Western blot analysis of Gemin 2 on different lysates with Rabbit anti-Gemin 2 antibody (HA722428) at 1/1,000 dilution.



Lane 1: HeLa cell lysate (20 µg/Lane)  
 Lane 2: HepG2 cell lysate (20 µg/Lane)  
 Lane 3: K-562 cell lysate (20 µg/Lane)  
 Lane 4: Mouse testis tissue lysate (40 µg/Lane)  
 Lane 5: Rat testis tissue lysate (40 µg/Lane)

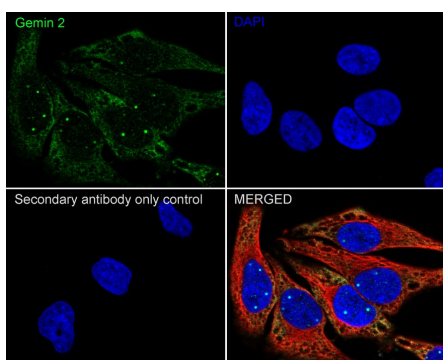
Predicted band size: 32 kDa  
 Observed band size: 32 kDa

Exposure time: 1 minute; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722428) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

**Fig2:** Immunocytochemistry analysis of HeLa cells labeling Gemin 2 with Rabbit anti-Gemin 2 antibody (HA722428) at 1/100 dilution.



Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Gemin 2 antibody (HA722428) at 1/100 dilution in 1% BSA in PBST overnight at 4 °C. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4°C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

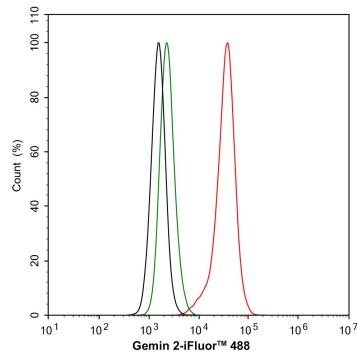
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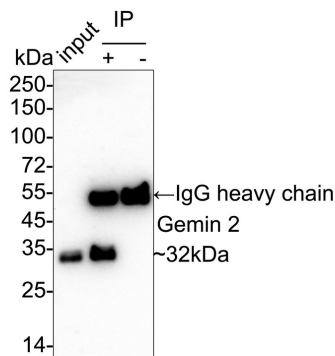
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**Fig3:** Flow cytometric analysis of HeLa cells labeling Gemin 2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA722428, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4°C for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4°C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).



**Fig4:** Gemin 2 was immunoprecipitated from 0.2 mg HeLa cell lysate with HA722428 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA722428 at 1/1,000 dilution. Alpaca anti-Rabbit IgG Fc, Recombinant VHH secondary antibody (HA1031) at 1/50,000 dilution was used for 1 hour at room temperature.

Lane 1: HeLa cell lysate (input)

Lane 2: HA722428 IP in HeLa cell lysate

Lane 3: Rabbit IgG instead of HA722428 in HeLa cell lysate

Blocking/Dilution buffer: 5% NFDm/TBST

Exposure time: 2 minutes 29 seconds; ECL: K1801

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

- Esser LM et al. The Impact of p70S6 Kinase-Dependent Phosphorylation of Gemin2 in UsnRNP Biogenesis. *Int J Mol Sci.* 2023 Oct
- Yi H et al. Negative cooperativity between Gemin2 and RNA provides insights into RNA selection and the SMN complex's release in snRNP assembly. *Nucleic Acids Res.* 2020 Jan

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