Anti-USP22 Antibody [JU63-27]

ET1706-13

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Tissue, IP
Molecular Wt:	Predicted band size: 60 kDa
Clone number:	JU63-27

Description: The ubiquitin (Ub) pathway involves three sequential enzymatic steps that facilitate the conjugation of Ub and Ub-like molecules to specific protein substrates. Through the use of a wide range of enzymes that can add or remove ubiquitin, the Ub pathway controls many intracellular processes such as signal transduction, transcriptional activation and cell cycle progression. USP22 (ubiquitin specific peptidase 22), also known as USP3L, is a 525 amino acid protein that contains one UBP-type zinc finger and functions to catalyze the conversion of a ubiquitin C-terminal thioester to free ubiquitin and thiol, a reaction that may influence several cellular processes. Via its catalytic activity, USP22 is thought to play an important role in cell cycle progression and may also serve as a cancer stem cell marker. The gene encoding USP22 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

Immunogen: Synthetic peptide within Human USP22 aa 321-370 / 525.

Positive control: HEK-293 cell lysate, HeLa cell lysate, Jurkat cell lysate, MCF7 cell lysate, Neuro-2a cell lysate, F9 cell lysate, C6 cell lysate, PC-12 cell lysate, Human brain tissue lysate, Human liver tissue lysate, Mouse brain tissue lysate, Rat brain tissue lysate, Rat liver tissue lysate, mouse brain tissue, rat brain tissue.

Subcellular location: Nucleus.

Database links: SwissProt: Q9UPT9 Human | Q5DU02 Mouse
Entrez Gene: 303201 Rat

Recommended Dilutions:

WB	1:1,000-1:5,000
IHC-P	1:200
IF-Tissue	1:50
IP	1-2μg/sample

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

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

Purity: Protein A affinity purified.

Images

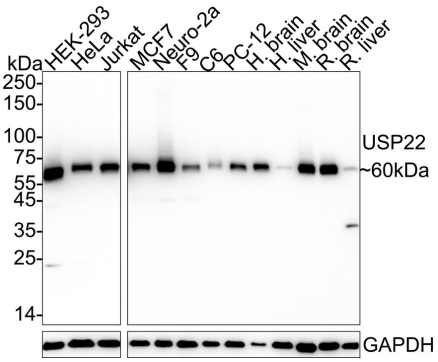

Fig1: Western blot analysis of USP22 on different lysates with Rabbit anti-USP22 antibody (ET1706-13) at 1/1,000 dilution.

Lane 1: HEK-293 cell lysate (15 µg/Lane)
Lane 2: HeLa cell lysate (15 µg/Lane)
Lane 3: Jurkat cell lysate (15 µg/Lane)
Lane 4: MCF7 cell lysate (15 µg/Lane)
Lane 5: Neuro-2a cell lysate (15 µg/Lane)
Lane 6: F9 cell lysate (15 µg/Lane)
Lane 7: C6 cell lysate (15 µg/Lane)
Lane 8: PC-12 cell lysate (15 µg/Lane)
Lane 9: Human brain tissue lysate (30 µg/Lane)
Lane 10: Human liver tissue lysate (30 µg/Lane)
Lane 11: Mouse brain tissue lysate (30 µg/Lane)
Lane 12: Rat brain tissue lysate (30 µg/Lane)
Lane 13: Rat liver tissue lysate (30 µg/Lane)

Predicted band size: 60 kDa
Observed band size: 60 kDa

Exposure time: Lane 1-3: 6 seconds; Lane 4-13: 21 seconds; 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 (ET1706-13) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

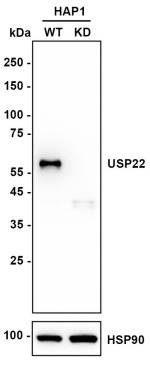

Fig2: Western blot analysis of USP22 on different lysates with Rabbit anti-USP22 antibody (ET1706-13) at 1/5,000 dilution.

Lane 1: HAP1-parental cell lysate (10 µg/Lane)
Lane 2: HAP1-USP22 KD cell lysate (10 µg/Lane)

Predicted band size: 60 kDa
Observed band size: 60 kDa
Exposure time: 60 seconds; 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 (ET1706-13) at 1/5,000 dilution was used in K1803 at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

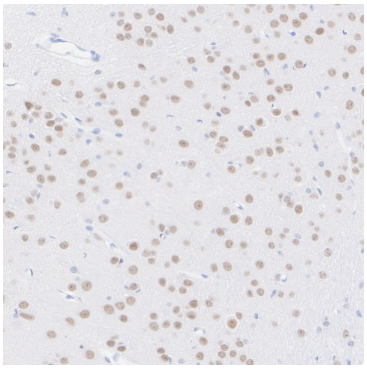

Fig3: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-USP22 antibody (ET1706-13) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1706-13) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

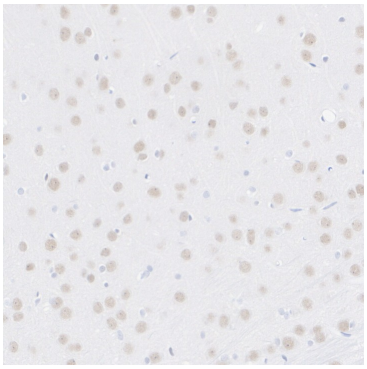

Fig4: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-USP22 antibody (ET1706-13) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1706-13) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

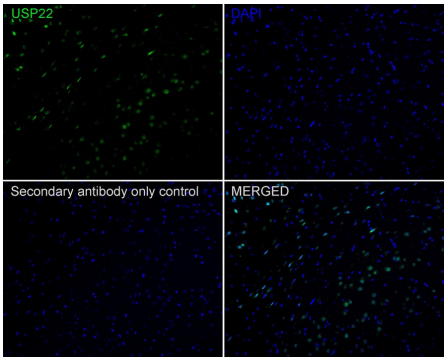

Fig5: Immunofluorescence analysis of paraffin-embedded mouse brain tissue labeling USP22 with Rabbit anti-USP22 antibody (ET1706-13) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (ET1706-13, green) at 1/50 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

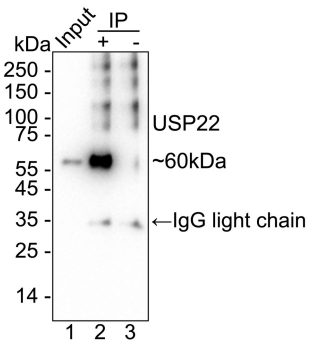

Fig6: USP22 was immunoprecipitated from 0.2 mg HeLa cell lysate with ET1706-13 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using ET1706-13 at 1/2,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: HeLa cell lysate (input)
Lane 2: ET1706-13 IP in HeLa cell lysate
Lane 3: Rabbit IgG instead of ET1706-13 in HeLa cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 14 seconds; ECL: K1801

Background References

1. Xu G et al. MicroRNA-30e-5p suppresses non-small cell lung cancer tumorigenesis by regulating USP22-mediated Sirt1/JAK/STAT3 signaling. Exp Cell Res pii: S0014-4827(17)30630-4 (2017) .
2. Wang A et al. USP22 Induces Cisplatin Resistance in Lung Adenocarcinoma by Regulating γH2AX-Mediated DNA Damage Repair and Ku70/Bax-Mediated Apoptosis. Front Pharmacol. 8:274 (2017).