Anti-IMP3 Antibody [C2-E4]

EM1701-15

Product Type:	Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell, FC, IP
Molecular Wt:	Predicted band size: 64 kDa
Clone number:	C2-E4

Description: Insulin like growth factor 2 mRNA binding proteins (IGF2BPs) bind RNA and influence RNA synthesis and metabolism. IGF2BP1, also known as coding region determinant-binding protein/insulin-like growth factor II mRNA-binding protein (CRD-BP), IMP1 or VICKZ1; IGF2BP2 (IMP2, VICKZ2, p62); and IGF2BP2 (IMP3, KOC1, VICKZ3) contain a unique combination of RNA recognition motifs and four hnRNP K homology domains. IGF2BP1 is abundant in embryonal tissues and is expressed in 81% of colon cancers, 73% of sarcomas and 58.5% of breast cancers. It recognizes c-Myc, IGF-II and t mRNAs, and H19 RNA, and plays a major role in proliferation of K-562 cells by an IGF-II-dependent mechanism. IGF2BP2 binds the 5' UTR of IGF-II mRNA and influences tumor cell growth, in which IGF2BP2 is associated with apoptosis induced by tretinoin. IGF2BP3 knockdown by RNA interference decreases levels of IGF-II protein without affecting IGF-II, c-Myc, or β Actin mRNA and H19 RNA levels. IGF2BP3 is a marker for carcinomas and high-grade dysplastic lesions of pancreatic ductal epithelium.

Immunogen: Recombinant protein within Human IMP-3 aa 352-579 / 579.

Positive control: HeLa cell lysate, 293T cell lysate, mouse placenta tissue lysate, rat placenta tissue lysate, Hela, SH-SY5Y, rat brain tissue, human liver cancer tissue, human placenta tissue, mouse testis tissue.

Subcellular location: Cytoplasm. Nucleus.

Database links: SwissProt: O00425 Human | Q9CPN8 Mouse
Entrez Gene: 315697 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:50
IHC-P	1:50-1:200
FC	1:50-1:100
IP	1-2μg/sample

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% 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

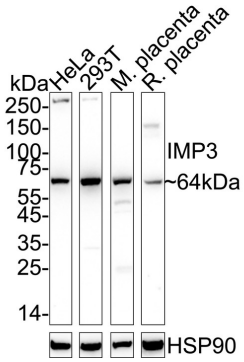

Fig1: Western blot analysis of IMP3 on different lysates with Mouse anti-IMP3 antibody (EM1701-15) at 1/2,000 dilution.

Lane 1: HeLa cell lysate (20 µg/Lane)
Lane 2: 293T cell lysate (20 µg/Lane)
Lane 3: Mouse placenta tissue lysate (40 µg/Lane)
Lane 4: Rat placenta tissue lysate (40 µg/Lane)

Predicted band size: 64 kDa
Observed band size: 64 kDa

Exposure time: 12 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 (EM1701-15) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

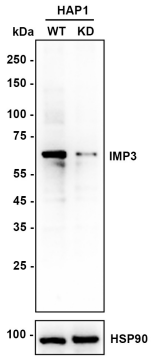

Fig2: Western blot analysis of IMP3 on different lysates with Mouse anti-IMP3 antibody (EM1701-15) at 1/5,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-IMP3 KD cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 64 kDa
Observed band size: 64 kDa

Exposure time: 6 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 (EM1701-15) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

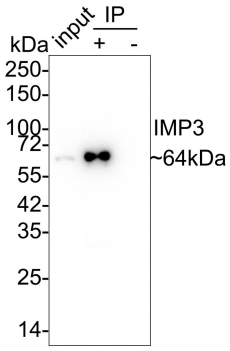

Fig3: IMP3 was immunoprecipitated from 0.2 mg 293T cell lysate with EM1701-15 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using EM1701-15 at 1/2,000 dilution. Anti-Mouse IgG for IP Nano-secondary antibody (NBI02H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: 293T cell lysate (input)
Lane 2: EM1701-15 IP in 293T cell lysate
Lane 3: Mouse IgG instead of EM1701-15 in 293T cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 43 seconds

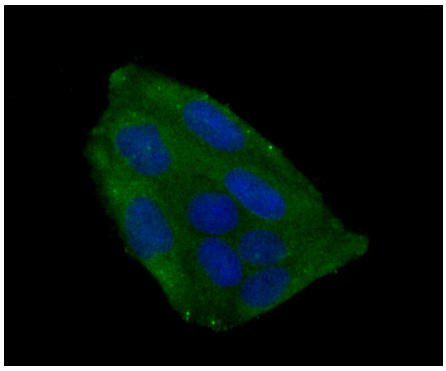

Fig4: ICC staining IMP3 (green) in Hela cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

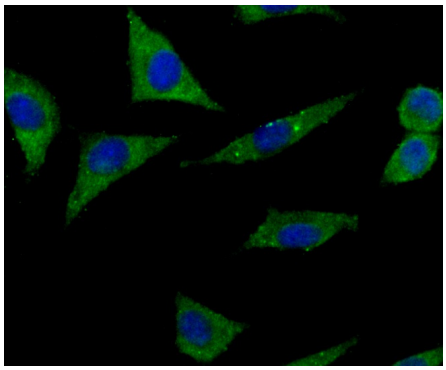

Fig5: ICC staining IMP3 (green) in SH-SY5Y cells. The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

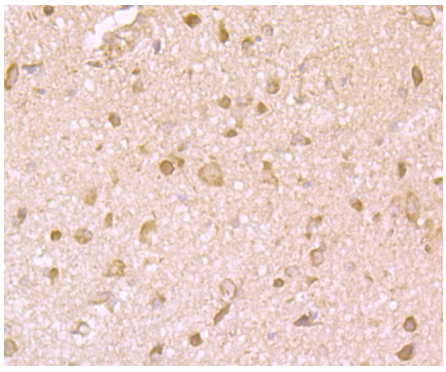

Fig6: Immunohistochemical analysis of paraffin-embedded rat brain tissue using anti-IMP3 antibody. Counter stained with hematoxylin.

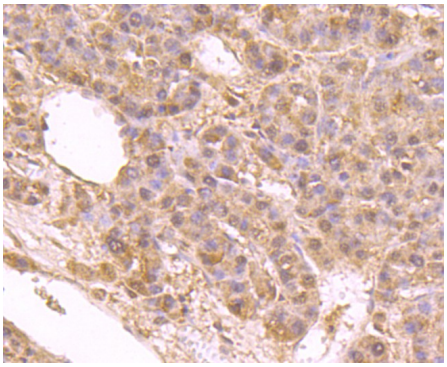

Fig7: Immunohistochemical analysis of paraffin-embedded human liver cancer tissue using anti-IMP3 antibody. Counter stained with hematoxylin.

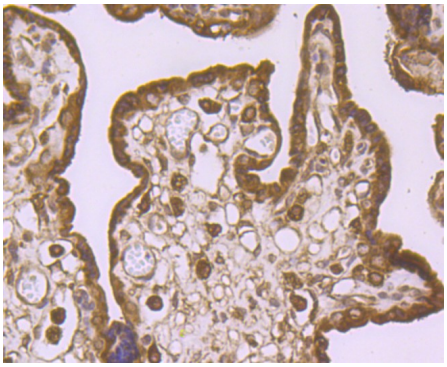

Fig8: Immunohistochemical analysis of paraffin-embedded human placenta tissue using anti-IMP3 antibody. Counter stained with hematoxylin.

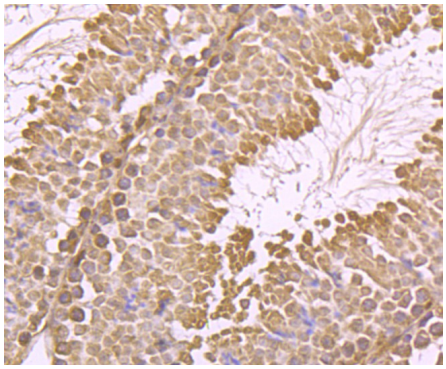

Fig9: Immunohistochemical analysis of paraffin-embedded mouse testis tissue using anti-IMP3 antibody. Counter stained with hematoxylin.

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

Background References

1. Davidson, B. et al. VICKZ2 protein expression in ovarian serous carcinoma effusions is associated with poor survival. Human pathology 45:1520-8 (2014).
2. Wang, L. et al. IMP3 is a novel biomarker to predict metastasis and prognosis of gastric adenocarcinoma: a retrospective study. Chin Med J 123:3554-3558 (2010).