

Anti-Osteocalcin Antibody

ER1919-20



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P, IF-Tissue
Molecular Wt:	11 kDa

Description: Osteocalcin, also known as bone gamma-carboxyglutamic acid-containing protein (BGLAP), is a noncollagenous protein hormone found in bone and dentin, first identified as a calcium-binding protein in chick bone. Because osteocalcin has gla domains, its synthesis is vitamin K dependent. In humans, osteocalcin is encoded by the BGLAP gene. Its receptors include GPRC6A, GPR158, and possibly a third, yet-to-be-identified receptor. Osteocalcin is secreted solely by osteoblasts and thought to play a role in the body's metabolic regulation. In its carboxylated form it binds calcium directly and thus concentrates in bone, but genetic evidence has revealed that it does not play an important role in bone mineralization. In its uncarboxylated form, osteocalcin acts as a hormone in the body, signalling in the pancreas, fat, muscle, testes, and brain. An Acute Stress Response (ASR) (colloquially known as the fight or flight response) stimulates osteocalcin release from bone within minutes in mice, rats, and humans. Injections of high levels of osteocalcin alone can trigger an ASR in the presence of adrenal insufficiency.

Immunogen:	KLH conjugated synthetic peptide derived from human Osteocalcin: 21-100/100
Positive control:	Mouse brain, NIH/3T3 cell lysates, MG63 cell lysates, A549 cell lysates, U-2 OS cell lysates, human skeletal muscle, human kidney,
Subcellular location:	Secreted.
Database links:	SwissProt: P02818 Human P86546 Mouse
Recommended Dilutions:	
WB	1:500-2000
IHC-P	1:100-500
IF-tissue	1:100-500: 1:5000-10000
Storage Buffer:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Storage Instruction:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Purity:	Protein A affinity purified.

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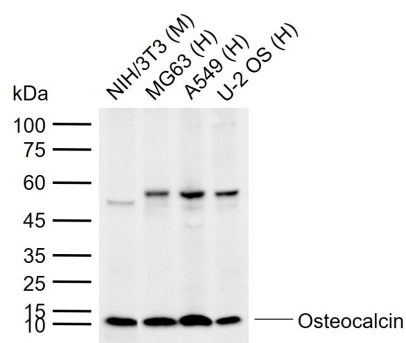
Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

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Images

**Fig1:** Sample:

Lane 1: Mouse NIH/3T3 cell lysates

Lane 2: Human MG63 cell lysates

Lane 3: Human A549 cell lysates

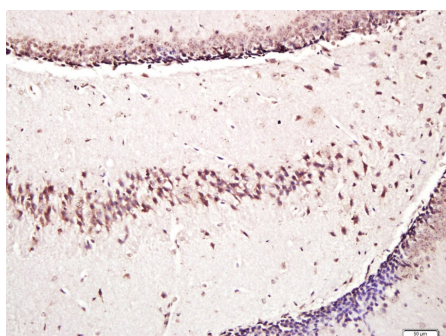
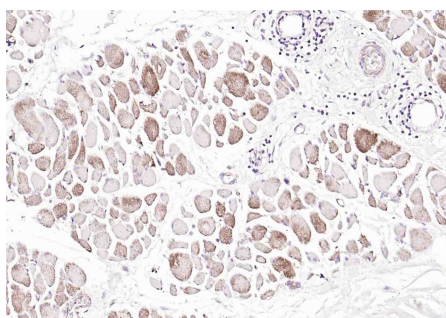
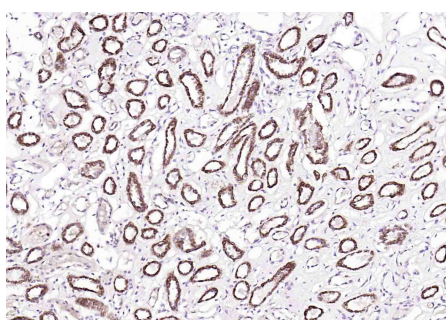
Lane 4: Human U-2 OS cell lysates

Primary: Anti-Osteocalcin (ER1919-20) at 1/500 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa

**Fig2:** Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Osteocalcin) Polyclonal Antibody, Unconjugated (ER1919-20) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.**Fig3:** Paraformaldehyde-fixed, paraffin embedded (human skeletal muscle); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (Osteocalcin) Polyclonal Antibody, Unconjugated (ER1919-20) at 1:100 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.**Fig4:** Paraformaldehyde-fixed, paraffin embedded (human kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (Osteocalcin) Polyclonal Antibody, Unconjugated (ER1919-20) at 1:100 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

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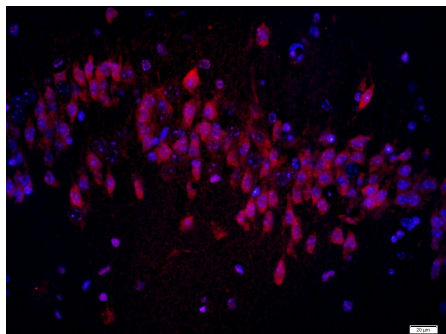


Fig5: citrate buffer (pH6) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Osteocalcin) Polyclonal Antibody, Unconjugated (ER1919-20) at 1:400 overnight at 4°C, followed by a conjugated secondary (Goat Anti-rabbit IgG/Bio) for 20minutes at 37°C, followed by a conjugated streptavidin at[1:500] for 40 minutes and DAPI staining of the nu Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium clei.

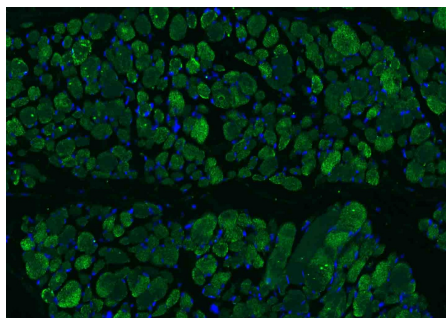


Fig6: Paraformaldehyde-fixed, paraffin embedded (human skeletal muscle); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (Osteocalcin) Polyclonal Antibody, Unconjugated (ER1919-20) at 1:100 overnight at 4°C, followed by a conjugated Goat Anti-Rabbit IgG antibody for 90 minutes, and DAPI for nuclei stainin

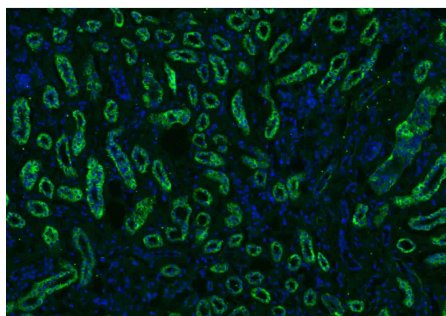


Fig7: Paraformaldehyde-fixed, paraffin embedded (human kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (Osteocalcin) Polyclonal Antibody, Unconjugated (ER1919-20) at 1:100 overnight at 4°C, followed by a conjugated Goat Anti-Rabbit IgG antibody for 90 minutes, and DAPI for nuclei staining.

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

Background References

1. Pi M et al. Journal of Bone and Mineral Research. 26 (7): 1680–3.
2. Berger JM et al. Mediation of the Acute Stress Response by the Skeleton. Cell Metabolism. doi:10.1016/j.cmet.2019.08.012

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