

Anti-Osterix Antibody

ER1914-47



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, ELISA
Molecular Wt:	45 KDa

Description: Transcription factor Sp7, also called Osterix (Osx), is a protein that in humans is encoded by the SP7 gene. It is a member of the Sp family of zinc-finger transcription factors [5] It is highly conserved among bone-forming vertebrate species. It plays a major role, along with Runx2 and Dlx5 in driving the differentiation of mesenchymal precursor cells into osteoblasts and eventually osteocytes. Sp7 also plays a regulatory role by inhibiting chondrocyte differentiation maintaining the balance between differentiation of mesenchymal precursor cells into ossified bone or cartilage. Mutations of this gene have been associated with multiple dysfunctional bone phenotypes in vertebrates. During development, a mouse embryo model with Sp7 expression knocked out had no formation of bone tissue. Through the use of GWAS studies, the Sp7 locus in humans has been strongly associated with bone mass density. [10] In addition there is significant genetic evidence for its role in diseases such as Osteogenesis imperfecta (OI). In a developing organism, Sp7 serves as one of the most important regulatory shepherds for bone formation. Outside of the context of development, in adult mice ablation of Sp7 led to a lack of new bone formation, highly irregular cartilage accumulation beneath the growth plate and defects in osteocyte maturation and functionality.

Immunogen: KLH conjugated synthetic peptide derived from human Osterix 331-431/431

Positive control: Osteoblast/chondrocyte specific.

Subcellular location: Nucleus.

Database links: SwissProt: Q8TDD2 Human

Recommended Dilutions:

WB 1:500-2000

ELISA 1:5000-10000

Storage Buffer: 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

Storage Instruction: Store at -20°C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4°C.

Purity: Protein A affinity purified.

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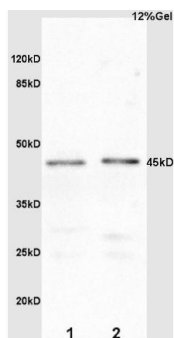
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Images

**Fig1:** Sample:

Embryo(Mouse) lysate at 30ug;

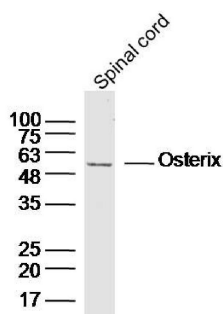
Embryo(Mouse) lysate at 30ug;

Primary: Anti-Osterix (ER1914-47) at 1:200 dilution;

Secondary: HRP conjugated Goat Anti-Rabbit IgG(bs-0295G-HRP) at 1: 3000 dilution;

Predicted band size : 45kD

Observed band size : 45kD

**Fig2:** Sample:Spinal cord (Mouse) Lysate at 40 ug

Primary: Anti-Osterix(ER1914-47)at 1/300 dilution

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

Predicted band size: 45kD

Observed band size: 50kD

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

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