Product Specification Sheet

Transcription factor SP-7/Osterix antibody

□ Cat # SP711-A | Rabbit anti-Mouse Osterix antibody | **SIZE**: 100 µg

Transcription factor Sp7 or Osterix, is a transcriptional activator that is essential for osteoblast differentiation. It plays a major role, along with Runx2 and Dlx5 in driving differentiation of mesenchymal precursor cells into osteoblasts. It also plays a regulatory role by inhibiting chondrocyte differentiation. Mutations in the gene have been associated with multiple dysfunctional bone phenotypes. In a mouse embry model, Osterix knockout led to no formation of bone tissue.

Source of Antigen or Antibodies

Uniprot: Q8VI67

Host: Rabbit

Clonality: Polyclonal

Immunogen: Mix of 2 synthetic peptides derived from Mouse Osterix conjugated to KLH

Purification: Ammonium sulfate followed by protein affinity purification

Species Reactivity: Mouse

Cross reactivity: The peptide used as an immunogen is 100% conserved across various species including but not limited to Human, Rat, Non-Human Primate, Camel, Zebrafish, Pig, Dog, Cat, Goat, Camel, and Bovine. If your species of interest is not on this list, contact ADI to perform a BLAST to determine cross-reactivity

Subcellular Location: Nucleus

Recommended Secondary Antibody: Goat anti-Rabbit IgG-HRP (**ADI cat#20320)**

Negative Control: Non-immune Rabbit IgG (**ADI cat# 20009**).

Form & Storage of Antibodies

□**Affinity pure IgG Solution**
Concentration: 0.5 mg/ml Volume: 200 µl
Supplied in PBS, pH 7.4 + 0.1% BSA
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

□ **Lyophilized powder**
Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

Storage:

Short-term: 4°C for 1 month

Long-term: at –20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple free/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at –20°C.

Recommended Usage

ELISA: Assay dependent concentration. Typically, between 0.1-2.0 µg/ml for capture/detection antibodies.

Western Blotting: 0.5-1.0 µg/ml
Predicted band size: 44.7 kDa. **Note:** Endogenous expression of Osterix is extremely low in most tissues and cell lines and will be undetectable using standard western blot techniques.

IHC-P: 1-10 µg/ml. QC tested using pH 6,10 mM sodium citrate antigen retrieval buffers. The antibody may work better with other retrieval solutions or no antigen retrieval.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications such as Immunocytochemistry or IP. These methods have not been tested by ADI.

This product is for In vitro research use only.

Related materials available from ADI

Catalog#	Description
BRDU11-A	Mouse anti-BrdU monoconal antibody
SP711-A	192801IA

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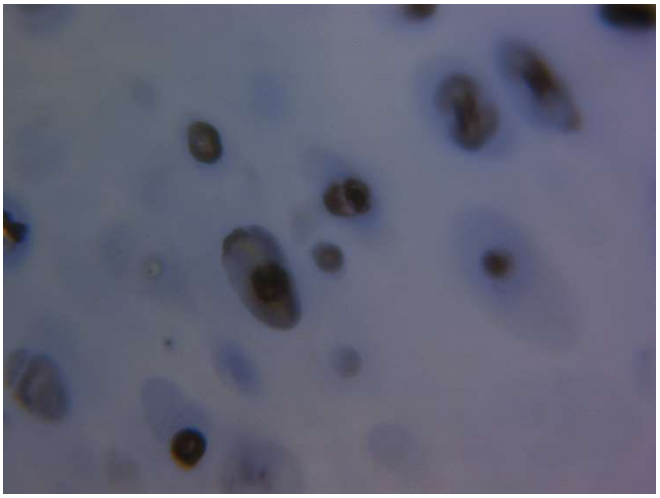

Immunohistochemistry: Human cartilage and Rat bone slides were heated for 20 minutes at 60ºC then deparrafinized. Antigen retrieval was performed for 10 minutes at 95ºC in a microwave using 10 mM sodium citrate pH 6, antigen retrieval buffer. The slides were then cooled for 20 minutes at room temperature before being blocked for 30 minutes with 2.5% normal goat serum. **SP711-A** was diluted to 5 µg/ml in TBST+0.1% BSA and incubated overnight at 4ºC. The slide was then washed twice and incubated with 3% hydrogen peroxide for 10 minutes to quench endogenous peroxidase. The slide was washed then incubated with Goat anti-Rabbit IgG HRP polymer detection reagent for 30 minutes at room temperature. The slide was washed twice, incubated with DAB for 3 minutes, washed with distilled water, then counterstained for 1 minute with Gil's II Hematoxylin before being cover-slipped.