abcam

Product datasheet

Anti-Sp7 / Osterix antibody [EPR21034] ab209484

Recombinant RabMAb

★★★★★ 7 Abreviews 91 References 9 Images

Overview

Product name	Anti-Sp7 / Osterix antibody [EPR21034]
Description	Rabbit monoclonal [EPR21034] to Sp7 / Osterix
Host species	Rabbit
Specificity	Mouse and rat species are recommended based on the IHC result. We do not guarantee western blot for mouse and rat.
Tested applications	**Suitable for:** WB, IP, IHC-Fr, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Saos-2 whole cell lysate. IHC-P: Mouse E15 embryo, rat E15 embryo, mouse E14.5 rib, rat E14.5 rib and human chondrosarcoma tissue. IHC-Fr: Mouse embryo E14.5 developing humerus tissue. IP: Saos-2 whole cell lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR21034
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab209484 in the following tested applications.

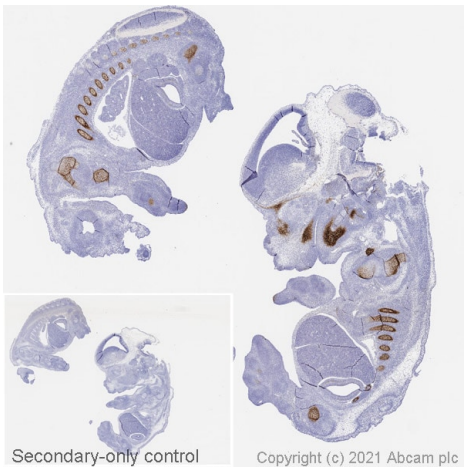
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Detects a band of approximately 45, 47 kDa (predicted molecular weight: 45 kDa). Mouse and rat species are recommended based on the IHC result. We do not guarantee western blot for mouse and rat.
IP		1/30.
IHC-Fr	★★★★★ (1)	1/500. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IHC-P	★★★★★ (5)	1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target

Function	Transcriptional activator essential for osteoblast differentiation. Binds to SP1 and EKLF consensus sequences and to other G/C-rich sequences.
Tissue specificity	Restricted to bone-derived cell.
Sequence similarities	Belongs to the Sp1 C2H2-type zinc-finger protein family. Contains 3 C2H2-type zinc fingers.
Cellular localization	Nucleus.

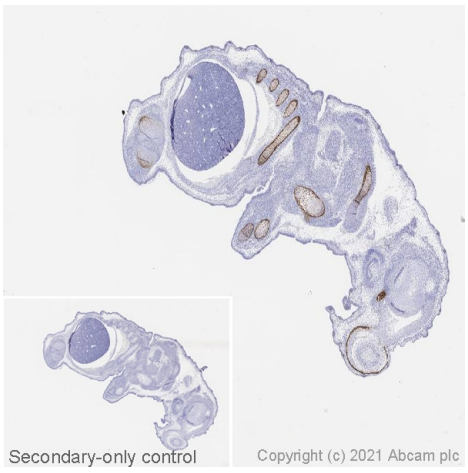
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

IHC image of SP7/Osterix staining in a section of formalin-fixed paraffin-embedded normal rat E15 embryo performed on a Leica BOND® system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with **ab22552**, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



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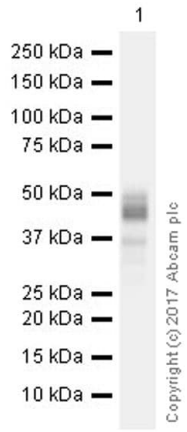


Western blot - Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

Anti-Sp7 / Osterix antibody [EPR21034] (ab209484) at 1/1000 dilution + Saos-2 (human osteosarcoma cell line) whole cell lysate at 10 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

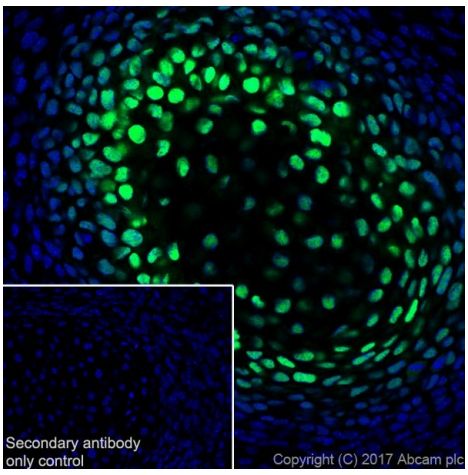
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 45 kDa
Observed band size: 45, 47 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

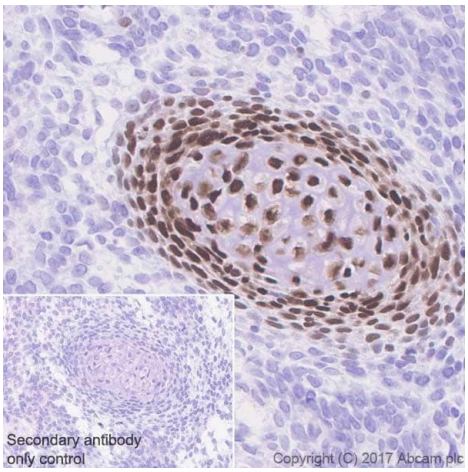
Human Sp7 / Osterix has two isoforms (45 and 47 kDa). The 45kDa isoform is predominant (UniProt ID: Q8TDD2). In Saos-2 cells, we observed a faint, extra band at around 37kDa.



Immunohistochemistry (Frozen sections) - Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized mouse E14.5 developing humerus tissue labeling Sp7 / Osterix with ab209484 at 1/500 dilution, followed by AlexaFluor® 488 Goat anti-Rabbit (**ab150077**) at 1/1000 dilution. Positive staining on the mouse embryo E14.5 developing humerus (PMID:27134141) is observed. Counter stained with DAPI.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is AlexaFluor® 488 Goat anti-Rabbit (**ab150077**) at 1/1000 dilution.

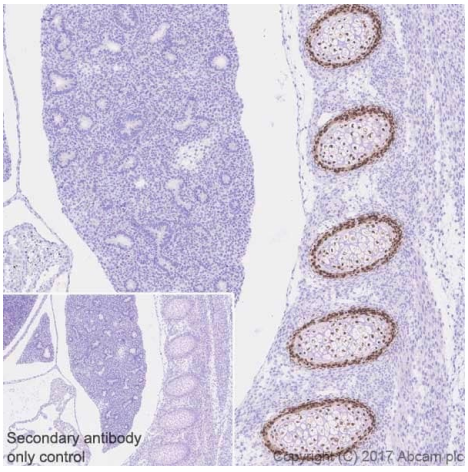


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

Immunohistochemical analysis of paraffin-embedded rat E14.5 rib tissue labeling Sp7 / Osterix with ab209484 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Nuclear staining on osteoblasts and chondrocytes of rat E14.5 rib (PMID: 17579353; PMID: 25977369) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



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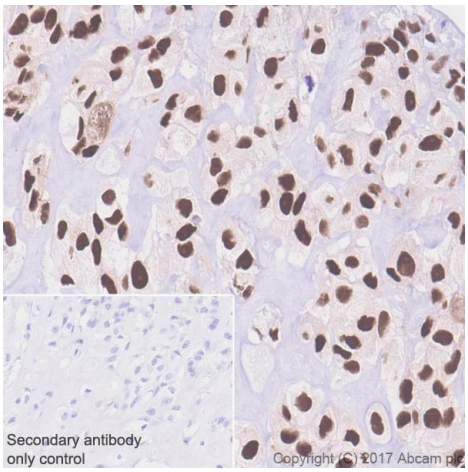
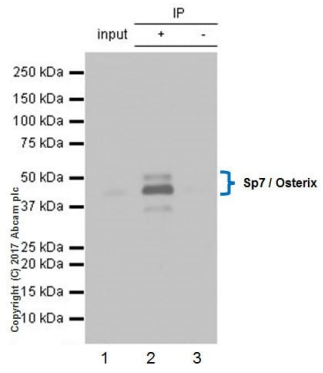


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

Immunohistochemical analysis of paraffin-embedded human chondrosarcoma tissue labeling Sp7 / Osterix with ab209484 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Nuclear staining on tumor cells of human chondrosarcoma is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunoprecipitation - Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

Sp7 / Osterix was immunoprecipitated from 0.35mg of Saos-2 (human osteosarcoma cell line) whole cell lysate with ab209484 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab209484 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10000 dilution.

Lane 1: Saos-2 whole cell lysate 10ug (Input).

Lane 2: ab209484 IP in Saos-2 whole cell lysate.

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of **ab190908** in Saos-2 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 8 seconds.

Anti-Sp7 / Osterix antibody [EPR21034] (ab209484)

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