abcam

Product datasheet

Anti-SPON1 antibody ab40797

1 Abreviews 5 References 3 Images

Overview

Product name	Anti-SPON1 antibody
Description	Rabbit polyclonal to SPON1
Host species	Rabbit
Tested applications	**Suitable for:** IHC-FoFr, ICC/IF, WB
Species reactivity	**Reacts with:** Mouse, Rat **Predicted to work with:** Cow, Human
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 750 to the C-terminus of Rat SPON1.Read Abcam's proprietary immunogen policy(Peptide available as ab41539.)
Positive control	This antibody gave a positive signal in the following tissue lysates: Rat Brain; Rat Spinal Cord; Mouse Ovary; Mouse 14 day fetal lysate.

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab40797** 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
IHC-FoFr		1/1000.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 5 µg/ml.
WB		Use a concentration of 2 µg/ml. Detects a band of approximately 91 kDa (predicted molecular weight: 91 kDa).

Target

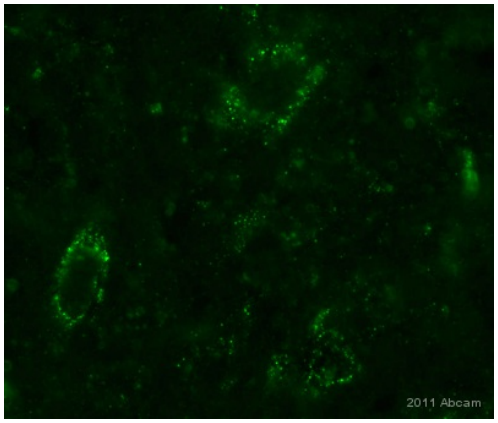
Relevance

SPON1 is a member of a subgroup of the thrombospondin type 1 (TSR) class molecules, defined by two domains of homology, the FS1/FS2 and TSR domains. The TSRs of SPON1 proteins are typical of class 2 TSRs. SPON1, which is similar to thrombospondin, is a extracellular matrix attached molecule that promotes neurite outgrowth and inhibits angiogenesis. Analysis of gain and loss of function experiments reveal that SPON1 is required for accurate pathfinding of embryonic axons, and plays a dual role in patterning axonal trajectories. It promotes the outgrowth of commissural and inhibits the outgrowth of motor axons, and has also been implicated in inflammatory processes in the nervous system.

Cellular localization

Secreted protein; extracellular space; extracellular matrix.

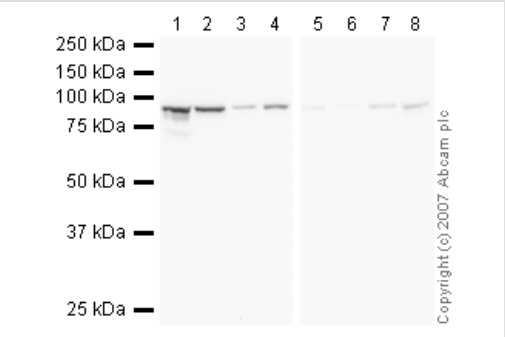
Images



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-SPON1 antibody (ab40797)

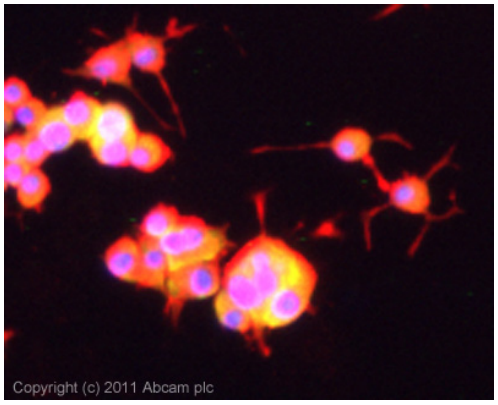
This image is courtesy of an abreview submitted by Sophie Pezet, ESPCI, France

IHC-FoFr image of SPON1 staining on Mouse Spinal Cord using ab40797 (1:1000).The sections used came from animals perfused fixed with Paraformaldehyde 4% with 15% of a solution of saturated picric acid, in phosphate buffer 0.1M. Following postfixation in the same fixative overnight, the spinal cord were cryoprotected in sucrose 30% overnight. Spinal cords were then cut using a cryostat and the immunostainings were performed using the ‘free floating’ technique.



Western blot - Anti-SPON1 antibody (ab40797)

ab40797 detects a 91 kDa band in the rat and mouse tissue lysates shown above. Addition of the immunizing peptide (derived from the SPON1 rat sequence) completely blocks ab40797 in rat tissue, however we are unsure as to why only partial blocking is observed in mouse tissue lysates. Blast analysis of the peptide sequence predicts 100% cross-reactivity with mouse.



Immunocytochemistry/ Immunofluorescence - Anti-SPON1 antibody (ab40797)

ICC/IF image of ab40797 stained PC12 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab40797, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899 Dylight 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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