abcam

Product datasheet

Anti-Twist2 antibody ab66031

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Overview

Product name	Anti-Twist2 antibody
Description	Rabbit polyclonal to Twist2
Host species	Rabbit
Specificity	This antibody is able to detect both Twist1 and Twist2 proteins. We have observed weak detection of the Twist1 protein using Twist1 recombinant proteins along with select lysates generating a BOI of weak signal associated to Twist1. The signal detected in the endogenous lysates and recombinant proteins is much greater for Twist2.
Tested applications	**Suitable for:** WB, IP
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Chicken, Cow
Immunogen	Synthetic peptide corresponding to Human Twist2 aa 1-100 conjugated to keyhole limpet haemocyanin. (Peptide available as **ab86241**)
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our

scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab66031 in the following tested applications.

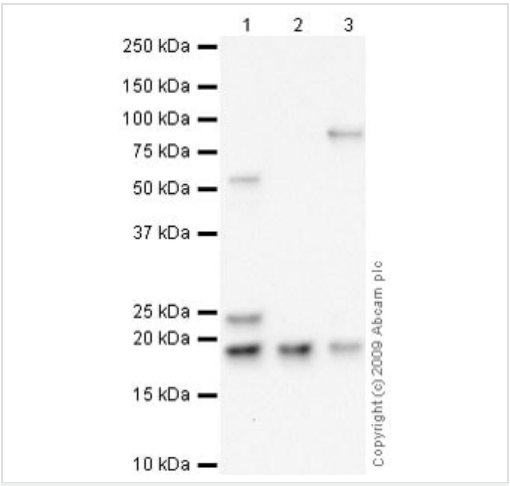
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 18 kDa (predicted molecular weight: 18 kDa).
IP		Use a concentration of 5 µg/ml.

Target

Function	Binds to the E-box consensus sequence 5'-CANNTG-3' as a heterodimer and inhibits transcriptional activation by MYOD1, MYOG, MEF2A and MEF2C. Also represses expression of proinflammatory cytokines such as TNFA and IL1B. Involved in postnatal glycogen storage and energy metabolism (By similarity). Inhibits the premature or ectopic differentiation of preosteoblast cells during osteogenesis, possibly by changing the internal signal transduction response of osteoblasts to external growth factors.
Tissue specificity	In the embryo, highly expressed in chondrogenic cells. In embryonic skin, expressed in the undifferentiated mesenchymal layer beneath the epidermis which later develops into the dermis. Expressed in early myeloid cells but not in lymphoid cells in the liver. Expression also detected in the secretory ependymal epithelium of the choroid plexus primordium. In the adult, expressed in secreting glandular tissues and tubules.
Involvement in disease	Defects in TWIST2 are the cause of Setleis syndrome (SETLEISS) [MIM:227260]. A focal facial dermal dysplasia characterized by distinctive bitemporal scar-like depressions resembling forceps marks, and additional facial features, including a coarse and leonine appearance, absent eyelashes on both lids or multiple rows on the upper lids, absent Meibomian glands, slanted eyebrows, chin clefting, and hypo- or hyperpigmentation of the skin. Histologically, the bitemporal lesion is an ectodermal dysplasia with near absence of subcutaneous fat, suggesting insufficient migration of neural crest cells into the frontonasal process and the first branchial arch.
Sequence similarities	Contains 1 basic helix-loop-helix (bHLH) domain.
Cellular localization	Nucleus. Cytoplasm. Mainly nuclear during embryonic development. Cytoplasmic in adult tissues.

Images



Western blot - Anti-Twist2 antibody (ab66031)

All lanes : Anti-Twist2 antibody (ab66031) at 1 µg/ml

Lane 1 : Human liver tissue lysate - total protein (**ab29889**)
Lane 2 : Human small intestine tissue lysate - total protein (**ab29276**)
Lane 3 : Human testis tissue lysate - total protein (**ab30257**)

Lysates/proteins at 10 µg per lane.

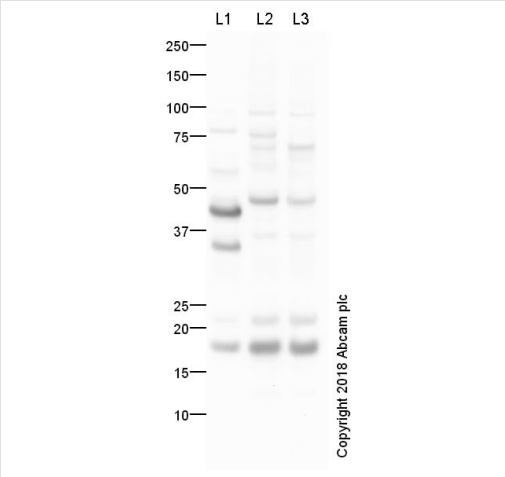
Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 18 kDa
Observed band size: 18 kDa
Additional bands at: 24 kDa, 55 kDa, 90 kDa. We are unsure as to the identity of these extra bands.

This antibody is able to detect both Twist1 and Twist2 proteins. However the affinity for Twist2 is much greater. The BOI at 18kDa is related to the higher affinity binding of Twist2. In select lysates, we have observed a weaker band between 21-25kDa likely to be the cross reactivity of Twist1.



Western blot - Anti-Twist2 antibody (ab66031)

All lanes : ab66031 at 1 µg/ml

Lane 1 : Human liver tissue lysate
Lane 2 : Human HEK293 whole cell lysate
Lane 3 : Human T47D whole cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 3000 cells

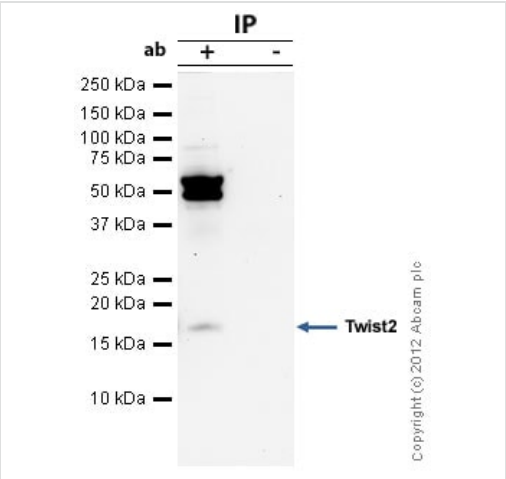
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 18 kDa
Additional bands at: 21 kDa (possible cross reactivity), 45 kDa, 46 kDa (possible non-specific binding). We are unsure as to the identity of these extra bands.

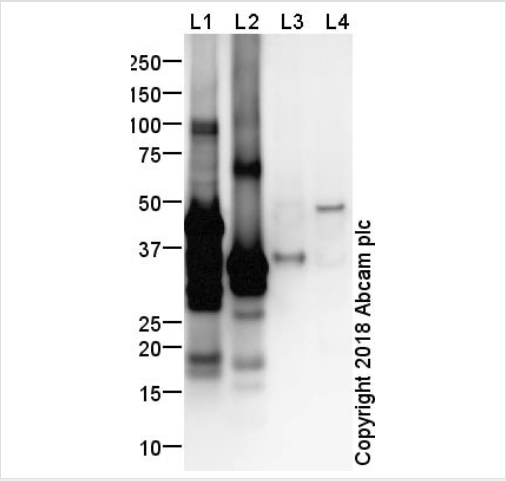
Exposure time: 1 minute

This antibody is able to detect both Twist1 and Twist2 proteins. However the affinity for Twist2 is much greater. The BOI at 18kDa is related to the higher affinity binding of Twist2. In select lysates, we have observed a weaker band between 21-25kDa likely to be the cross reactivity of Twist1.



Immunoprecipitation - Anti-Twist2 antibody (ab66031)

Twist2 was immunoprecipitated using 0.5mg Mouse Liver tissue lysate, 5µg of Rabbit polyclonal to Twist2 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Mouse Liver tissue lysate lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70^{o}C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab66031.
Secondary: Clean-Blot IP Detection Reagent (HRP) at 1/500 dilution.
Band: 18kDa; Twist2



Western blot - Anti-Twist2 antibody (ab66031)

All lanes : ab66031 at 1 µg/ml

Lane 1 : Recombinant Human Twist2 protein **ab132641**
Lane 2 : Recombinant Human Twist2 protein **ab153585**
Lane 3 : Recombinant Human Twist protein **ab112368**
Lane 4 : Recombinant Human Twist protein **ab132349**

Lysates/proteins at 0.1 µg per lane.

Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 18 kDa
Observed band size: 37,45,48 kDa

Exposure time: 4 minutes

This antibody is able to detect both Twist1 and Twist2 proteins. However the affinity for Twist2 is much greater, as demonstrated by the use of the recombinant proteins.

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