# abcam

# Product datasheet

# Anti-KAT13A / SRC1 antibody ab2859

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Overview

Product name Anti-KAT13A / SRC1 antibody

**Description** Rabbit polyclonal to KAT13A / SRC1

Host species Rabbit

**Specificity** Detects steroid receptor coactivator-1 (SRC-1).

Tested applications Suitable for: ICC, ICC/IF, IHC-Fr

**Species reactivity** Reacts with: Mouse, Rat, Human

Predicted to work with: Pig

Immunogen Synthetic peptide corresponding to Human KAT13A/ SRC1 aa 1-100.

Database link: Q15788

(Peptide available as ab5848)

Run BLAST with
Run BLAST with

Positive control ICC: HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate ICC/IF: A549

(Human lung carcinoma cell line) whole cell lysate IHC-Fr: Mouse brain; Rat Brain

**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** Preservative: 0.05% Sodium azide

Constituents: 0.1% BSA, 99% PBS

Purity Immunogen affinity purified

**Clonality** Polyclonal

1

Isotype ΙgG

### **Applications**

### The Abpromise guarantee

Our Abpromise guarantee covers the use of ab2859 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
ICC		Use at an assay dependent concentration.
ICC/IF	<b>★★★</b> ☆☆ <u>(1)</u>	Use a concentration of 1 µg/ml.
IHC-Fr	<b>★★★★★ (1)</b>	Use a concentration of 1 µg/ml.

# **Target**

#### **Function**

Nuclear receptor coactivator that directly binds nuclear receptors and stimulates the transcriptional activities in a hormone-dependent fashion. Involved in the coactivation of different nuclear receptors, such as for steroids (PGR, GR and ER), retinoids (RXRs), thyroid hormone (TRs) and prostanoids (PPARs). Also involved in coactivation mediated by STAT3, STAT5A, STAT5B and STAT6 transcription factors. Displays histone acetyltransferase activity toward H3 and H4; the relevance of such activity remains however unclear. Plays a central role in creating multisubunit coactivator complexes that act via remodeling of chromatin, and possibly acts by participating in both chromatin remodeling and recruitment of general transcription factors. Required with NCOA2 to control energy balance between white and brown adipose tissues. Required for mediating steroid hormone response. Isoform 2 has a higher thyroid hormonedependent transactivation activity than isoform 1 and isoform 3.

# Tissue specificity

Widely expressed.

# Involvement in disease

Note=A chromosomal aberration involving NCOA1 is a cause of rhabdomyosarcoma. Translocation t(2;2)(q35;p23) with PAX3 generates the NCOA1-PAX3 oncogene consisting of the N-terminus part of PAX3 and the C-terminus part of NCOA1. The fusion protein acts as a transcriptional activator. Rhabdomyosarcoma is the most common soft tissue carcinoma in childhood, representing 5-8% of all malignancies in children.

### Sequence similarities

Belongs to the SRC/p160 nuclear receptor coactivator family.

Contains 1 basic helix-loop-helix (bHLH) domain. Contains 1 PAS (PER-ARNT-SIM) domain.

#### **Domain**

The C-terminal (1107-1441) part mediates the histone acetyltransferase (HAT) activity. Contains 7 Leu-Xaa-Xaa-Leu-Leu (LXXLL) motifs. LXXLL motifs 3, 4 and 5 are essential for the association with nuclear receptors. LXXLL motif 7, which is not present in isoform 2, increases the affinity for steroid receptors in vitro.

# Post-translational

Sumoylated; sumoylation increases its interaction with PGR and prolongs its retention in the nucleus. It does not prevent its ubiquitination and does not exert a clear effect on the stability of the protein.

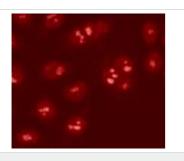
Ubiquitinated; leading to proteasome-mediated degradation. Ubiquitination and sumoylation take place at different sites.

Phosphorylated upon DNA damage, probably by ATM or ATR.

2

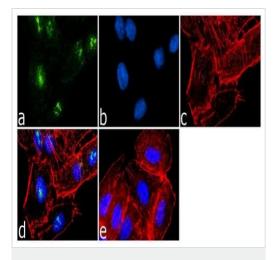
# modifications

## **Images**



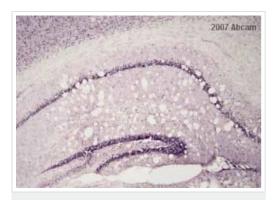
Immunocytochemistry - Anti-KAT13A / SRC1 antibody (ab2859)

Immunolocalization of SRC1 in HeLa cells using ab2859.



Immunocytochemistry/ Immunofluorescence - Anti-KAT13A / SRC1 antibody (ab2859)

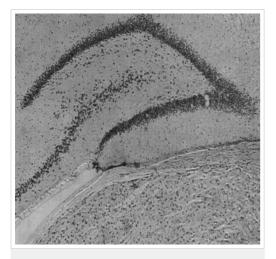
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.25% Triton™ X-100 permeabilized, 70% confluent log phase A549 (Human lung carcinoma cell line) cells, blocked with 3% BSA-PBS for 1 hour at room temperature. Labelling KAT13A / SRC1 with ab2859 at 1 µg/mL and incubated for 3 hours at room temperature then labelled with secondary antibody goat anti-rabbit igG, Alexa Fluor® 488 conjugate at a 1/2000 dilution for 45 minutes at room temperature (Green). Nuclei stained with DAPI (Blue). F-actin stained with Alexa Fluor® 555 Rhodamine Phalloidin at a dilution of 1/300 (Red). Panel e shows the no primary antibody control. The images were captured at 60X magnification.



Immunohistochemistry (Frozen sections) - Anti-KAT13A / SRC1 antibody (ab2859)

This image is courtesy of an Abreview submitted by Dr Jiqiang Zhang

ab2859 at 1/2000 staining mouse brain tissue sections by IHC-Fr. The tissue was paraformaldehyde fixed and blocked with serum prior to incubation with the antibody for 72 hours. A biotinylated goat anti-rabbit antibody was used as the secondary.



Immunohistochemistry (Frozen sections) - Anti-KAT13A / SRC1 antibody (ab2859)

Immunohistochemitry (Frozen sections) analysis of SRC1 in the Dentate Gyrus region of the rat brain using ab2859.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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