

Product datasheet

Recombinant Human KAT13A / SRC1 protein ab81812

Overview

Product name	Recombinant Human KAT13A / SRC1 protein
Protein length	Protein fragment

Description

Nature	Recombinant
Source	Escherichia coli

Amino Acid Sequence

Species	Human
Amino acids	627 to 786

Specifications

Our [Abpromise guarantee](#) covers the use of **ab81812** in the following tested applications.

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

Applications	SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. Preservative: None Constituents: 20% Glycerol, 20mM Tris HCl, 100mM Potassium chloride, 1mM DTT, 0.2mM EDTA, pH 8.0
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General Info

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
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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 hormone-dependent 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 modifications

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.

Cellular localization

Nucleus.

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