

Recombinant Human KAT13A / SRC1 protein ab81791

Description

Product name	Recombinant Human KAT13A / SRC1 protein
Purity	> 95 % SDS-PAGE.
Expression system	Escherichia coli
Accession	<u>Q15788</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Amino acids	627 to 786
Tags	DDDDK tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab81791** 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
	Functional Studies

Form	Liquid
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Additional notes

The region 627-786 contains 3 LXXLL motifs that are involved in interaction with nuclear hormone receptors and have been previously used in assays detecting ligand-dependent receptor-cofactor interactions. ab81791 contains the Tobacco Etch virus (TEV) protease site and can be cleaved using acTEV to yield untagged SRC1 Receptor Interaction domain. This protein will be useful for assays where a native untagged protein is desired.

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 7.9 Constituents: 0.75% Potassium chloride, 0.0154% DTT, 0.316% Tris HCl, 0.00584% EDTA, 20% Glycerol (glycerin, glycerine)
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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 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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