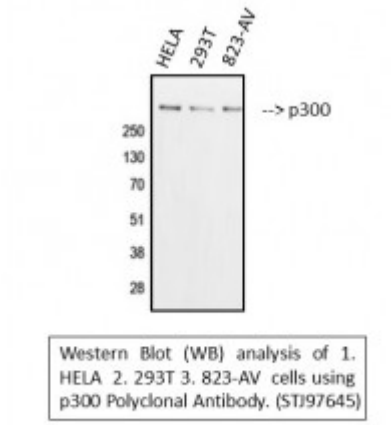
Anti-p300 antibody



Western Blot (WB) analysis of 1. HELA 2. 293T 3. 823-AV cells using p300 Polyclonal Antibody. (STJ97645)

Description	p300 is a protein encoded by the EP300 gene which is approximately 264,1 kDa. p300 is localised to the cytoplasm and nucleus. It is involved in signalling by NOTCH1, transcription-coupled nucleotide excision repair and the regulation of lipid metabolism. It functions as a histone acetyl-transferase that regulates transcription via chromatin remodelling and is important in the processes of cell proliferation and differentiation. p300 is expressed in the liver, nervous system, blood skin and muscle. Mutations in the EP300 gene may result in colorectal cancer. STJ97645 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. This polyclonal antibody detects endogenous levels of p300 protein.

Model	STJ97645
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human p300.
Immunogen Region	Internal
Gene ID	2033
Gene Symbol	EP300
Dilution range	WB 1:500-1:2000IHC-P 1:100-1:300ELISA 1:10000
Specificity	p300 Polyclonal Antibody detects endogenous levels of p300 protein.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Note	For Research Use Only (RUO).
Protein Name	Histone acetyltransferase p300 p300 HAT E1A-associated protein p300 Histone butyryltransferase p300 Histone crotonyltransferase p300 Protein propionyltransferase p300
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:3373OMIM:602700
Alternative Names	Histone acetyltransferase p300 p300 HAT E1A-associated protein p300 Histone butyryltransferase p300 Histone crotonyltransferase p300 Protein propionyltransferase p300
Function	Functions as histone acetyltransferase and regulates transcription via chromatin remodeling. Acetylates all four core histones in nucleosomes. Histone acetylation gives an epigenetic tag for transcriptional activation. Mediates cAMP-gene regulation by binding specifically to phosphorylated CREB protein. Mediates acetylation of histone H3 at 'Lys-122' (H3K122ac), a modification that localizes at the surface of the histone octamer and stimulates transcription, possibly by promoting nucleosome instability. Mediates acetylation of histone H3 at 'Lys-27' (H3K27ac). Also functions as acetyltransferase for nonhistone targets. Acetylates 'Lys-131' of ALX1 and acts as its coactivator. Acetylates SIRT2 and is proposed to indirectly increase the transcriptional activity of TP53 through acetylation and subsequent attenuation of SIRT2 deacetylase function. Acetylates HDAC1 leading to its inactivation and modulation of transcription. Acts as a TFAP2A-mediated transcriptional coactivator in presence of CITED2. Plays a role as a coactivator of NEUROD1-dependent transcription of the secretin and p21 genes and controls terminal differentiation of cells in the intestinal epithelium. Promotes cardiac myocyte enlargement. Can also mediate transcriptional repression. Binds to and may be involved in the transforming capacity of the adenovirus E1A protein. In case of HIV-1 infection, it is recruited by the viral protein Tat. Regulates Tat's transactivating activity and may help inducing chromatin remodeling of proviral genes. Acetylates FOXO1 and enhances its transcriptional activity. Acetylates BCL6 wich disrupts its ability to recruit histone deacetylases and hinders its transcriptional repressor activity. Participates in CLOCK or NPAS2-regulated rhythmic gene transcription; exhibits a circadian association with CLOCK or NPAS2, correlating with increase in PER1/2 mRNA and histone H3 acetylation on the PER1/2 promoter. Acetylates MTA1 at 'Lys-626' which is essential for its transcriptional coactivator activity . Acetylates XBP1 isoform 2; acetylation increases protein stability of XBP1 isoform 2 and enhances its transcriptional activity . Acetylates PCNA; acetylation promotes removal of chromatin-bound PCNA and its degradation during nucleotide excision repair (NER) . Acetylates MEF2D.
Sequence and Domain Family	The CRD1 domain (cell cycle regulatory domain 1) mediates transcriptional

	repression of a subset of p300 responsive genes; it can be de-repressed by CDKN1A/p21WAF1 at least at some promoters. It conatins sumoylation and acetylation sites and the same lysine residues may be targeted for the respective modifications. It is proposed that deacetylation by SIRT1 allows sumoylation leading to suppressed activity.
Cellular Localization	Cytoplasm. Nucleus. In the presence of ALX1 relocalizes from the cytoplasm to the nucleus. Colocalizes with ROCK2 in the nucleus.
Post-translational Modifications	Acetylated on Lys at up to 17 positions by intermolecular autocatalysis. Deacetylated in the transcriptional repression domain (CRD1) by SIRT1, preferentially at Lys-1020. Deacetylated by SIRT2, preferentially at Lys-418, Lys-423, Lys-1542, Lys-1546, Lys-1549, Lys-1699, Lys-1704 and Lys-1707. Citrullinated at Arg-2142 by PADI4, which impairs methylation by CARM1 and promotes interaction with NCOA2/GRIP1. Methylated at Arg-580 and Arg-604 in the KIX domain by CARM1, which blocks association with CREB, inhibits CREB signaling and activates apoptotic response. Also methylated at Arg-2142 by CARM1, which impairs interaction with NCOA2/GRIP1. Sumoylated; sumoylation in the transcriptional repression domain (CRD1) mediates transcriptional repression. Desumoylated by SENP3 through the removal of SUMO2 and SUMO3. Probable target of ubiquitination by FBXO3, leading to rapid proteasome-dependent degradation.; Phosphorylated by HIPK2 in a RUNX1-dependent manner. This phosphorylation that activates EP300 happens when RUNX1 is associated with DNA and CBFB. Phosphorylated by ROCK2 and this enhances its activity. Phosphorylation at Ser-89 by AMPK reduces interaction with nuclear receptors, such as PPARG.