

## Product datasheet for **SR423486**

### Ep300 Mouse siRNA Oligo Duplex (Locus ID 328572)

#### Product data:

Product Type:	siRNA Oligo Duplexes
Purity:	HPLC purified
Quality Control:	Tested by ESI-MS
Sequences:	Available with shipment
Stability:	One year from date of shipment when stored at -20°C.
# of transfections:	Approximately 330 transfections/2nmol in 24-well plate under optimized conditions (final conc. 10 nM).
Note:	Single siRNA duplex (10nmol) can be ordered.
RefSeq:	<a href="#">NM_177821</a>
UniProt ID:	<a href="#">B2RWS6</a>
Synonyms:	A430090G16; A730011L11; KAT3B; p300; p300 HAT
Components:	Ep300 (Mouse) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 328572) Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol Included - SR30005, RNase free siRNA Duplex Resuspension Buffer - 2 ml



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**Summary:**

Functions as histone acetyltransferase and regulates transcription via chromatin remodeling (By similarity). Acetylates all four core histones in nucleosomes (By similarity). Histone acetylation gives an epigenetic tag for transcriptional activation (By similarity). Mediates cAMP-gene regulation by binding specifically to phosphorylated CREB protein (PubMed:18486321, PubMed:24216764). 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 (By similarity). Mediates acetylation of histone H3 at 'Lys-27' (H3K27ac) (By similarity). Also functions as acetyltransferase for non-histone targets, such as ALX1, HDAC1, PRMT1 or SIRT2 (PubMed:28883095). Acetylates 'Lys-131' of ALX1 and acts as its coactivator (By similarity). Acetylates SIRT2 and is proposed to indirectly increase the transcriptional activity of TP53 through acetylation and subsequent attenuation of SIRT2 deacetylase function (By similarity). Acetylates HDAC1 leading to its inactivation and modulation of transcription (By similarity). Acts as a TFAP2A-mediated transcriptional coactivator in presence of CITED2 (By similarity). 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 (By similarity). Promotes cardiac myocyte enlargement (By similarity). Can also mediate transcriptional repression (By similarity). Acetylates FOXO1 and enhances its transcriptional activity (By similarity). Acetylates BCL6 which disrupts its ability to recruit histone deacetylases and hinders its transcriptional repressor activity (By similarity). 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 (By similarity). Acetylates MTA1 at 'Lys-626' which is essential for its transcriptional coactivator activity (PubMed:14645221, PubMed:9512516). Acetylates XBP1 isoform 2; acetylation increases protein stability of XBP1 isoform 2 and enhances its transcriptional activity (PubMed:20955178). Acetylates PCNA; acetylation promotes removal of chromatin-bound PCNA and its degradation during nucleotide excision repair (NER) (By similarity). Acetylates MEF2D (By similarity). Acetylates and stabilizes ZBTB7B protein by antagonizing ubiquitin conjugation and degradation, this mechanism may be involved in CD4/CD8 lineage differentiation (PubMed:20810990). In addition to protein acetyltransferase, can use different acyl-CoA substrates, such as (2E)-butenoyl-CoA (crotonyl-CoA), butanoyl-CoA (butyryl-CoA) or propanoyl-CoA (propionyl-CoA), and is able to mediate protein crotonylation, butyrylation or propionylation, respectively (PubMed:27105113). Acts as a histone crotonyltransferase; crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. Histone crotonyltransferase activity is dependent on the concentration of (2E)-butenoyl-CoA (crotonyl-CoA) substrate and such activity is weak when (E)-but-2-enoyl-CoA (crotonyl-CoA) concentration is low (By similarity). Also acts as a histone butyryltransferase; butyrylation marks active promoters (PubMed:27105113). Functions as a transcriptional coactivator for SMAD4 in the TGF-beta signaling pathway (By similarity). Acetylates PCK1 and promotes PCK1 anaplerotic activity (By similarity).[UniProtKB/Swiss-Prot Function]

**Performance  
Guaranteed:**

OriGene guarantees that at least two of the three Dicer-Substrate duplexes in the kit will provide at least 70% or more knockdown of the target mRNA when used at 10 nM concentration by quantitative RT-PCR when the TYE-563 fluorescent transfection control duplex (cat# SR30002) indicates that >90% of the cells have been transfected and the HPRT positive control (cat# SR30003) provides 90% knockdown efficiency.

For non-conforming siRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the siRNA kit. To arrange for a free replacement with newly designed duplexes, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled siRNA control (quantitative RT-PCR data required).