

Broad Institute - Encode3 Secondary Antibody Validation

Millipore 07-449 Lot: DAM1662421

Target: H3K27me3

Approved name: Anti-trimethyl-Histone H3 (Lys 27)

Function: Histone H3 is one of the five main histone proteins involved in the structure of chromatin in eukaryotic cells. Featuring a main globular domain and a long N-terminal tail, H3 is involved with the structure of the nucleosome. The N-terminal tail of histone H3 protrudes from the globular nucleosome core and can undergo several different types of epigenetic modifications that influence cellular processes. These modifications include the covalent attachment of methyl or acetyl groups to lysine and arginine amino acids and the phosphorylation of serine or threonine. Lysine 27 trimethylation is associated with repression of gene expression by the activity of the Polycomb complex.

References:

1. Science. 2001. 293(5532):1074-80. Translating the histone code. Jenuwein T, Allis CD. [PMID: 11498575](#).

Antibody being validated:

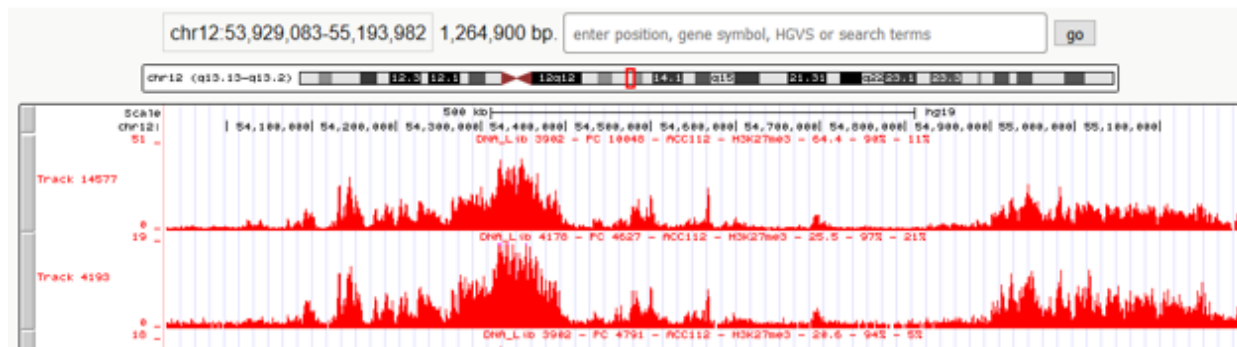
1. Millipore 07-449 Lot: DAM1662421 [Rabbit polyclonal, affinity purified]
2. Broad Alias: PchAb 69-V
3. Immunogen: KLH-conjugated, synthetic 2X-branched peptide containing the sequence ...AR(me3K)SAP... in which me3K corresponds to trimethyl-lysine at residue 27 of human histone H3
4. <https://www.encodeproject.org/antibodies/ENCAB000ASD/>

This validation relies on the use of antibodies to a histone modification (H3K27me3) in ACC112 cells, and the demonstration that highly similar patterns of enrichment are obtained with each antibody. Please note that the two antibodies originate from two lots of the same vendor antibody part number. The first track shown used an antibody to H3K27me3 (PchAb 69-V, ENCAB000ASD), and the second track shown used an antibody to H3K27me3 previously characterized to Encode standards (PchAb 683, ENCAB000BLA).

Genomewide correlation = 0.91

ENCAB000ASD

ENCAB000BLA



Antibody being compared (H3K27me3):

1. Millipore 07-449 Lot: 2039786 [Rabbit polyclonal, affinity purified]
2. Broad Alias: PchAb 683
3. Immunogen: KLH-conjugated, synthetic 2X-branched peptide containing the sequence ...AR(me3K)SAP... in which me3K corresponds to trimethyl-lysine at residue 27 of human histone H3
4. <https://www.encodeproject.org/antibodies/ENCAB000BLA/>