

# Broad Institute - Encode3 Secondary Antibody Validation

Abcam ab8898 Lot: GR93671-1

Target: H3K9me3

Approved name: Anti-trimethyl-Histone H3 (Lys 9)

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 9 trimethylation is associated with heterochromatin and low-complexity genomic regions.

## References:

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

## Antibody being validated:

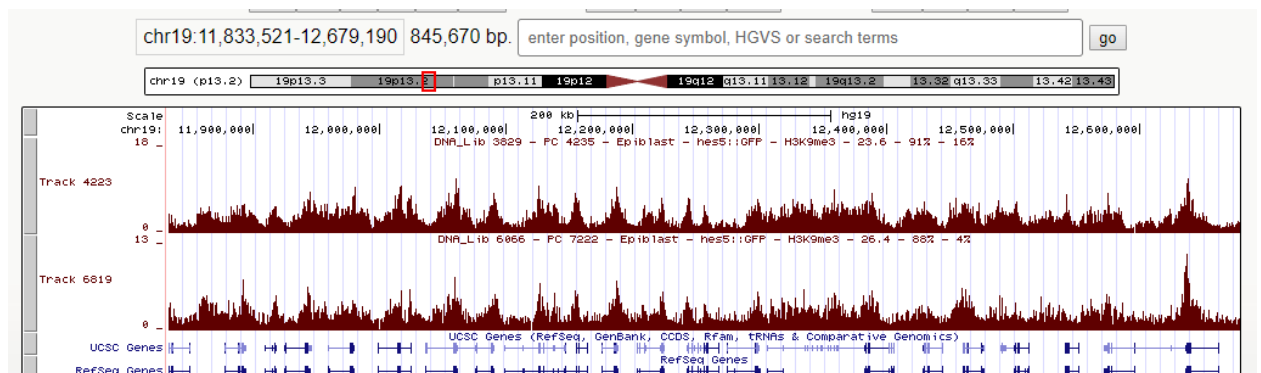
1. Abcam ab8898 Lot: GR93671-1 [Rabbit polyclonal, affinity purified]
2. Broad Alias: PchAb 911
3. Immunogen: Synthetic peptide within Human Histone H3 aa 1-100 (N terminal) (tri methyl K9) conjugated to Keyhole Limpet Haemocyanin (KLH)
4. <https://www.encodeproject.org/antibodies/ENCAB778TBN/>

This validation relies on the use of antibodies to a histone modification (H3K9me3) in epiblast 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 H3K9me3 (PchAb 911, ENCAB778TBN), and the second track shown used an antibody to H3K9me3 previously characterized to Encode standards (PchAb 125- V, ENCAB000APY).

Genomewide correlation = 0.72; p-value < 2.2E-16. Please note, due to the relatively limited coverage of H3K9me3 in non-repetitive regions of the genome, we expect a lower track – track correlation for H3K9me3 than for other more ubiquitously occurring peaks.

ENCAB778TBN

ENCAB000APY



Antibody being compared (H3K9me3):

1. Abcam ab8898 Lot: 877391 [Rabbit polyclonal, affinity purified]
2. Broad Alias: PchAb 125- V
3. Immunogen: Synthetic peptide within Human Histone H3 aa 1-100 (N terminal) (tri methyl K9) conjugated to Keyhole Limpet Haemocyanin (KLH)
4. <https://www.encodeproject.org/antibodies/ENCAB000APY/>