

# Broad Institute – Encode4 Secondary Antibody Validation

Diagenode C15410210 Lot: A2359-00234P Target: CTCF

Approved name: CCCTC-binding factor

Function: CTCF functions in concert with other subunits of the cohesion complex to insulate domains of active and inactive chromatin from one another, and to create boundaries between topologically associating chromosome domains.

Other complex members: CTCF complexes with cohesion complex members, particularly including STAG2 (SA2).

## References:

1. Proc Natl Acad Sci U S A. 2008. 105(24):8309-14. CTCF physically links cohesion to chromatin. Rubio ED, Reiss DJ, Welcsh PL, Disteché CM, Filippova GN, Baliga NS, Aebersold R, Ranish JA, Krumm A. PMID: 18550811
2. Mol Cell Biol. 2011. 31(11):2174-83. Specific sites in the C terminus of CTCF interact with the SA2 subunit of the cohesin complex and are required for cohesin-dependent insulation activity. Xiao T, Wallace J, Felsenfeld G. PMID: 21444719
3. Nat Rev Genet. 2014. 15(4):234-46. CTCF: an architectural protein bridging genome topology and function. Ong CT, Corces VG. PMID: 24614316

## Antibody being validated:

1. Diagenode C15410210 Lot: A2359-00234P [Rabbit polyclonal]
2. Broad Alias: PchAb 1378
3. Immunogen: Four KLH coupled peptides modeled on the sequence of CTCF
4. <https://www.encodeproject.org/antibodies/ENCAB719MQZ/>

This validation relies on the use of two different antibodies raised against different, non-overlapping peptides, both derived from the sequence of human CTCF, and the discovery of highly correlated patterns of enrichment by ChIP-Seq in thyroid and lung tissues. The polyclonal antibody being validated (ENCAB719MQZ) was raised against four KLH coupled synthetic peptides modeled on the sequence of human CTCF. In contrast, the monoclonal antibody was raised against a peptide derived from the carboxy terminus of human CTCF.

Overall correlation score = 0.8501

