

## AbFlex® CTCF antibody (rAb)

**Catalog Nos:** 91285, 91286

**Isotype:** IgG

**Application(s):** ChIP-Seq, CUT&Tag, WB

**Reactivity:** Human

**Quantities:** 100 µg, 10 µg

**Purification:** Protein A Chromatography

**Host:** Rabbit

**Concentration:** 1 µg/µl

**Molecular Weight:** 120 kDa

**Background:** AbFlex® antibodies are recombinant antibodies (rAbs) that have been generated using defined DNA sequences to produce highly specific, reproducible antibodies. Each AbFlex antibody contains a 6xHis Tag, a Biotinylation Tag for enzymatic biotin conjugation using the biotin ligase, BirA, and a sortase recognition motif (LPXTG) to attach a variety of labels directly to the antibody including fluorophores, enzymatic substrates (HRP, AP), peptides, drugs as well as solid supports. AbFlex® CTCF antibody was expressed in CHO cells and contains rabbit immunoglobulin heavy and light chains.

**CTCF** (CCCTC-binding factor, zinc finger protein) is a chromatin binding factor that binds to DNA sequence specific sites. It is involved in transcriptional regulation by binding to chromatin insulators and preventing interaction between promoter and nearby enhancers and silencers. Preferentially interacts with unmethylated DNA, preventing spreading of CpG methylation and maintaining methylation-free zones. Inversely, binding to target sites is prevented by CpG methylation. Plays an important role in chromatin remodeling. Can dimerize when it is bound to different DNA sequences, mediating long-range chromatin looping.

**Immunogen:** This antibody was raised against a peptide within human CTCF.

**Buffer:** Purified IgG in 140 mM Hepes, pH 7.5, 70 mM NaCl, 32 mM NaOAc, 0.035% sodium azide, 30% glycerol. Sodium azide is highly toxic.

### Application Notes:

Applications Validated by Active Motif:

ChIP-Seq: 4 µg per ChIP

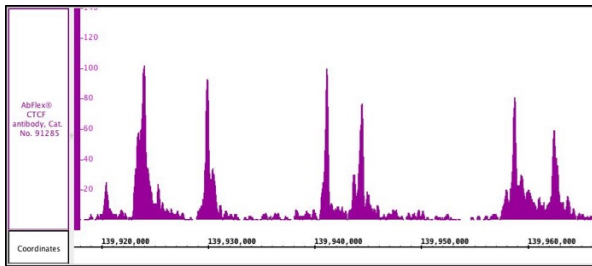
WB: 0.1-1 µg/ml

CUT&Tag: 1 µl per 50 µl reaction

Note: Many chromatin-bound proteins are not soluble in a low salt nuclear extract and fractionate to the pellet. Therefore, we recommend a High Salt / Sonication Protocol when preparing nuclear extracts.

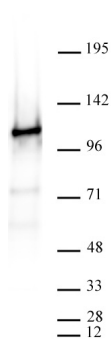
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



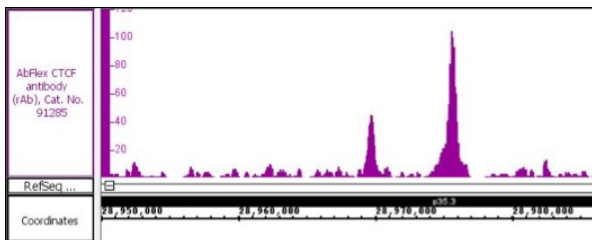
#### AbFlex® CTCF recombinant antibody (rAb) tested by ChIP-Seq

Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT® High Sensitivity Kit (Cat. No. 53040) with 30 µg of MCF7 chromatin and 4 µg of CTCF antibody. ChIP DNA was sequenced on the Illumina NextSeq and 8.9 million sequence tags were mapped to identify CTCF binding sites on chromosome 9.



#### AbFlex® CTCF antibody (rAb) tested by Western blot.

20 µg of HeLa cell nuclear extract was run on SDS-PAGE and probed with AbFlex CTCF antibody at 0.2 µg/ml.



#### AbFlex® CTCF recombinant antibody (rAb) tested by CUT&Tag

CUT&Tag was performed using 250,000 K562 cells and sequenced using 38 base-pair, paired-end reads on the Illumina NextSeq 500/550. Data was collected from 21 million reads, and CTCF data is shown for Chromosome 1.