For Research Use Only

CTCF Polyclonal antibody

Catalog Number:10915-1-AP 6 Publications

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Basic Information

Catalog Number:
10915-1-AP

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG1340

GenBank Accession Number:
BC014267

GeneID (NCBI):
10664

UNIPROT ID:
P49711

Full Name:
CCCTC-binding factor (zinc finger protein)

Calculated MW:
83 kDa

Observed MW:
55-100 kDa, 130-150 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:500-1:1000
IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC: 1:20-1:200
IF/ICC: 1:200-1:800

Applications

Tested Applications:
WB, IHC, IF/ICC, IP, ELISA

Cited Applications:
WB, ChIP, RIP

Species Specificity:
human, mouse

Cited Species:
human

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : human brain tissue, 4T1 cells, HEK-293T cells

IP : MCF-7 cells,

IHC : human lymphoma tissue,

IF/ICC : HepG2 cells,

Background Information

Transcriptional insulators are DNA elements that set boundaries on the actions of enhancer and silencer elements and thereby organize the eukaryotic genome into regulatory domains. All vertebrate insulators appear to use the versatile CTCF protein. CTCF uses various combinations of its 11 zinc fingers to recognize a variety of unrelated DNA sequences. Once bound to DNA, CTCF can function as a transcriptional insulator, repressor, or activator, depending on the context of the binding site [PMID:12787766,15454938]. In vertebrates, this 11 zinc-finger protein is shown to be crucial in processes of epigenetic imprinting, X chromosome inactivation , and associated with various complex human diseases including cancer and diabetes [PMID:23139640]. The calcualted molecular weight of CTCF is 83 kDa, but stimulation of human corneal epithelial cells with hypoxic stress suppressed a high molecular mass form of CTCF (150 kDa), but not a lower molecular weight form of CTCF (130 kDa)(PMID: 22354964), and there are multiple isoforms of CTCF with molecular masses of 55, 70, 73, 80, 97, and 130 kDa have been observed (PMID: 12878173).

Notable Publications

Author	Pubmed ID	Journal	Application
Haoxue Wang	34665859	Carcinogenesis	WB
Tao Chen	34634929	mBio	ChIP
Liangmin Fu	40948085	Adv Sci (Weinh)	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
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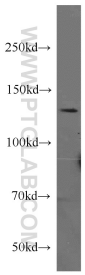
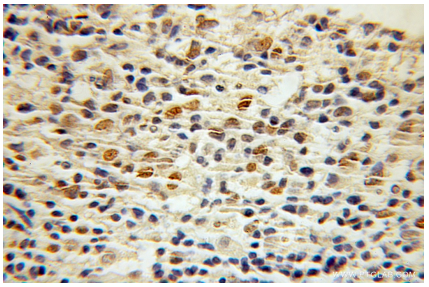
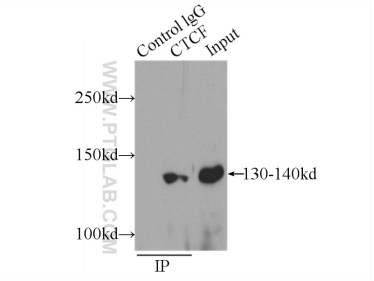
Selected Validation Data



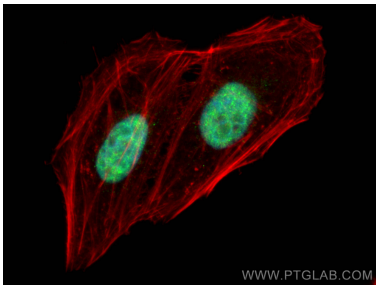
human brain tissue were subjected to SDS PAGE followed by western blot with 10915-1-AP (CTCF antibody) at dilution of 1:500 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human lymphoma using 10915-1-AP (CTCF antibody) at dilution of 1:100 (under 10x lens).



IP result of anti-CTCF (IP:10915-1-AP, 5ug; Detection:10915-1-AP 1:300) with MCF-7 cells lysate 2560ug.



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using CTCF antibody (10915-1-AP) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L), CL594-Phalloidin (red).