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CBX4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2074a

Product Information

Application	WB, IHC, FC, E
Primary Accession	O00257
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6C5G3
Isotype	IgG1
Calculated MW	61368
Description	CBX4 (chromobox homolog 4) is a protein-coding gene. Diseases associated with CBX4 include brain cancer. GO annotations related to this gene include chromatin binding and transcription corepressor activity. An important paralog of this gene is CBX8.
Immunogen	Purified recombinant fragment of human CBX4 (AA: 397-514) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	8535
Other Names	E3 SUMO-protein ligase CBX4, 6.3.2.-, Chromobox protein homolog 4, Polycomb 2 homolog, Pc2, hPc2, CBX4
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CBX4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CBX4
Function	E3 SUMO-protein ligase that catalyzes sumoylation of target proteins by promoting the transfer of SUMO from the E2 enzyme to the substrate (PubMed:12679040, PubMed:22467880, PubMed:22825850). Also acts as a

	histone reader, which specifically recognizes and binds histone H3 trimethylated at 'Lys-9' and 'Lys-27' (H3K9me3 and H3K27me3, respectively) via its chromo domain (By similarity). Catalyzes sumoylation of HNRNPK, a p53/TP53 transcriptional coactivator, hence indirectly regulates p53/TP53 transcriptional activation resulting in p21/CDKN1A expression (PubMed:22825850). Acts as a regulator of brown adipocyte differentiation by mediating sumoylation of PRDM16, thereby preventing PRDM16 ubiquitination and degradation (By similarity). Monosumoylates ZBTB35 (PubMed:22467880). Component of a Polycomb group (PcG) multiprotein PRC1-like complex, a complex class required to maintain the transcriptionally repressive state of many genes, including Hox genes, throughout development (PubMed:12167701, PubMed:19636380, PubMed:21282530). PcG PRC1 complex acts via chromatin remodeling and modification of histones; it mediates monoubiquitination of histone H2A 'Lys-119', rendering chromatin heritably changed in its expressibility (PubMed:12167701, PubMed:19636380, PubMed:21282530). Plays a role in the lineage differentiation of the germ layers in embryonic development (By similarity).
Cellular Location	Cytoplasm. Nucleus. Nucleus speckle. Note=Localization to nuclear polycomb bodies is required for ZBTB35 sumoylation (PubMed:22467880) Localized in distinct foci on chromatin (PubMed:18927235)
Tissue Location	Ubiquitous.

References

1.Cell Stem Cell. 2011 Sep 2;9(3):233-46.2.Ann Surg Oncol. 2013 Dec;20 Suppl 3:S684-92.

Images

