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RUNX3 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1757a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	Q13761
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	2B3
Isotype	IgG2b
Calculated MW	44356
Description	This gene encodes a member of the runt domain-containing family of transcription factors. A heterodimer of this protein and a beta subunit forms a complex that binds to the core DNA sequence 5'-PYGPYGGT-3' found in a number of enhancers and promoters, and can either activate or suppress transcription. It also interacts with other transcription factors. It functions as a tumor suppressor, and the gene is frequently deleted or transcriptionally silenced in cancer. Multiple transcript variants encoding different isoforms have been found for this gene.
Immunogen	Purified recombinant fragment of human RUNX3 (AA:186-252) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	864
Other Names	Runt-related transcription factor 3, Acute myeloid leukemia 2 protein, Core-binding factor subunit alpha-3, CBF-alpha-3, Oncogene AML-2, Polyomavirus enhancer-binding protein 2 alpha C subunit, PEA2-alpha C, PEBP2-alpha C, SL3-3 enhancer factor 1 alpha C subunit, SL3/AKV core-binding factor alpha C subunit, RUNX3, AML2, CBFA3, PEBP2A3
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A 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	RUNX3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RUNX3
Synonyms	AML2, CBFA3, PEBP2A3
Function	Forms the heterodimeric complex core-binding factor (CBF) with CBFB. RUNX members modulate the transcription of their target genes through recognizing the core consensus binding sequence 5'- TGTGGT-3', or very rarely, 5'-TGCGGT-3', within their regulatory regions via their runt domain, while CBFB is a non-DNA-binding regulatory subunit that allosterically enhances the sequence-specific DNA-binding capacity of RUNX. The heterodimers bind to the core site of a number of enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor enhancers, LCK, IL3 and GM-CSF promoters (By similarity). May be involved in the control of cellular proliferation and/or differentiation. In association with ZFHX3, up- regulates CDKN1A promoter activity following TGF-beta stimulation (PubMed:20599712). CBF complexes repress ZBTB7B transcription factor during cytotoxic (CD8+) T cell development. They bind to RUNX-binding sequence within the ZBTB7B locus acting as transcriptional silencer and allowing for cytotoxic T cell differentiation. CBF complexes binding to the transcriptional silencer is essential for recruitment of nuclear protein complexes that catalyze epigenetic modifications to establish epigenetic ZBTB7B silencing (By similarity). Necessary for the development and survival of sensory neurons expressing parvalbumin (By similarity).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00399, ECO:0000269|PubMed:20100835, ECO:0000269|PubMed:20599712}. Cytoplasm. Note=The tyrosine phosphorylated form localizes to the cytoplasm. Translocates from the cytoplasm to the nucleus following TGF-beta stimulation
Tissue Location	Expressed in gastric cancer tissues (at protein level).

References

1.J Cancer Res Clin Oncol. 2011 Dec;137(12):1823-30.2.Oncogene. 2012 Jan 26;31(4):527-34.

Images

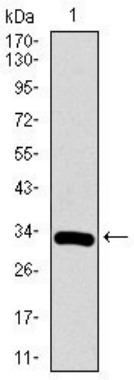
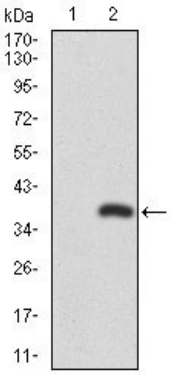


Figure 1: Western blot analysis using RUNX3 mAb against human RUNX3 recombinant protein. (Expected MW is 33 kDa)

Figure 2: Western blot analysis using RUNX3 mAb against HEK293 (1) and RUNX3 (AA: 186-252)-hIgGFc transfected HEK293 (2) cell lysate.



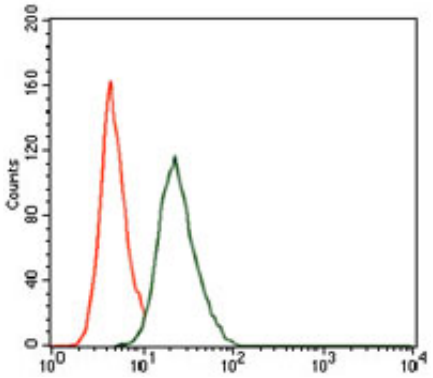


Figure 4: Flow cytometric analysis of NIH3T3 cells using RUNX3 mouse mAb (green) and negative control (red).

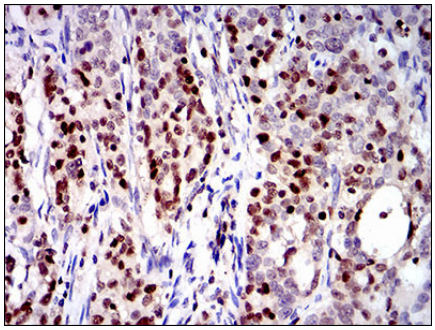


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using RUNX3 mouse mAb with DAB staining.