

RUNX3 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1757a

Specification

RUNX3 Antibody - Product Information

Application	E, WB, FC, IHC
Primary Accession	O13761
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	44.4kDa KDa

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

RUNX3 Antibody - 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

E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400
IHC~~1/200 - 1/1000

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.

RUNX3 Antibody - Protein Information

Name RUNX3

Synonyms AML2, CBFA3, PEBP2A3

Function

Forms the heterodimeric complex core-binding factor (CBF) with CBFβ. 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 CBFβ 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 ZFH3, up-regulates CDKN1A promoter activity following TGF-β 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).

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-β stimulation

Tissue Location

Expressed in gastric cancer tissues (at protein level).

RUNX3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

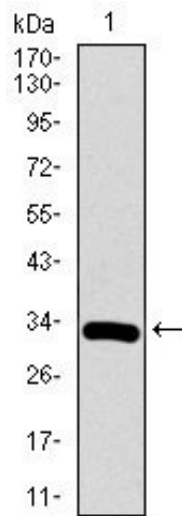
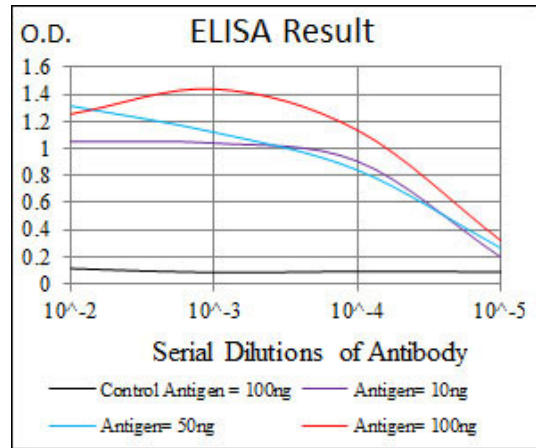


Figure 1: Western blot analysis using RUNX3 mAb against human RUNX3 recombinant protein. (Expected MW is 33 kDa)

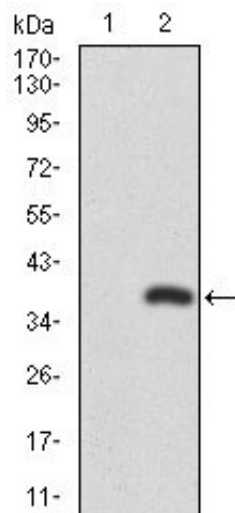


Figure 2: Western blot analysis using RUNX3 mAb against HEK293 (1) and RUNX3 (AA: 186-252)-hlgGfc transfected HEK293 (2) cell lysate.

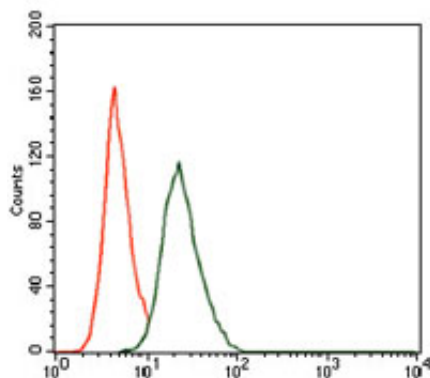


Figure 4: Flow cytometric analysis of NIH3T3 cells using RUNX3 mouse mAb (green) and negative control (red).

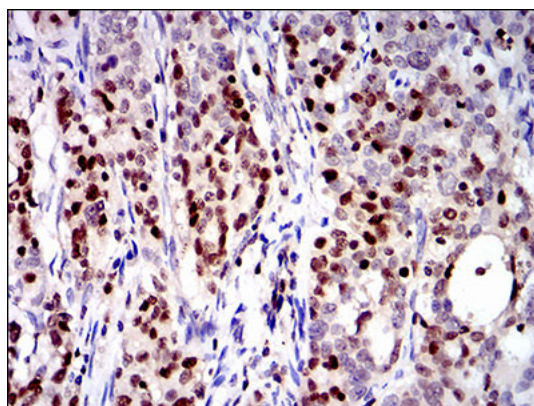


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using RUNX3 mouse mAb with DAB staining.

RUNX3 Antibody - References

1. J Cancer Res Clin Oncol. 2011 Dec;137(12):1823-30.
2. Oncogene. 2012 Jan 26;31(4):527-34.