Go-ChIP-Grade™ Purified anti-RUNX3 Antibody

Catalog# / Size	653603 / 25 µg 653604 / 100 µg
Clone	9F4A17
Regulatory Status	RUO
Other Names	Runt-related transcription factor 3, Polyomavirus enhancer-binding protein 2 alpha C subunit (PEBP2 alpha C), Acute myeloid leukemia 2 (AML2)
Isotype	Mouse IgG2a, κ
Description	RUNX3 belongs to the runt-domain family of transcription factors that regulates gene expression in major developmental pathways, such as T-cell differentiation and neurogenesis. RUNX3 is epigenetically silenced in many types of cancers. In gastric cancer, RUNX3 has been frequently reported to be inactivated by gene silencing or protein mislocalization. The oncoprotein SRC phosphorylates RUNX3 at multiple tyrosine residues, resulting in cytoplasmic mislocalization of RUNX3. RUNX3 is regulated by the TGF-B/Smad pathway, and induces apoptosis or cell cycle arrest of gastric cancer cells through upregulating expression of p21 and Bim. The loss of RUNX3 function in T-cells cause suppression of Treg function and formation of colitis tumor. These findings suggest an important role of RUNX3 in tumor suppression.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Partial human RUNX3 recombinant protein (194-304 aa).
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	ChIP - *Quality tested*
Recommended Usage	Each lot of this antibody is quality control tested by ChIP Assay. The suggested dilution for ChIP application is 1:50-1:100 by volume. It is recommended that the reagent to be titrated for optimal performance before each experiment.
Application Notes	The binding of RUNX3 antibody (9F4A17) to its target is sensitive to salt concentration.
RRID	AB_2687117 (BioLegend Cat. No. 653603) AB_2687118 (BioLegend Cat. No. 653604)

Antigen Details

Structure	44 kD protein containing a runt domain and a proline/serine/threonine rich domain required for transcriptional activation.
Distribution	Nucleus, the tyrosine phosphorylated form is localized to the cytoplasm.
Function	RUNX3 is a transcription factor that forms a heterodimeric complex with CBF beta subunit. The RUNX3 heterodimer binds to numerous enhancers and promoters, activating or suppressing target genes. RUNX3 was reported to function as a tumor suppressor.

Interaction	RUNX3 interacts with TLE1, SUV39H1, SRC, FYN, and LCK.
Cell Type	Tregs
Biology Area	Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Cell Cycle/DNA Replication, Immunology, Transcription Factors
Molecular Family	Nuclear Markers
Antigen References	1. Goh YM, *et al.* 2010. *J. Biol. Chem.* 285:10122. 2. Vogiatzi P, *et al.* 2006. *Cancer Biol. Ther.* 5:371. 3. Inoue K, *et al.* 2008. *Neural Dev.* 3:20. 4. Sugai M, *et al.* 2011. *J. Immunol.* 186:6515. 5. Ito K, *et al.* 2005. *Cancer Res.* 65:7743. 6. Hsu PI, *et al.* 2009. *Ann. Surg. Oncol.* 16:1686.
Gene ID	864

Related Protocols

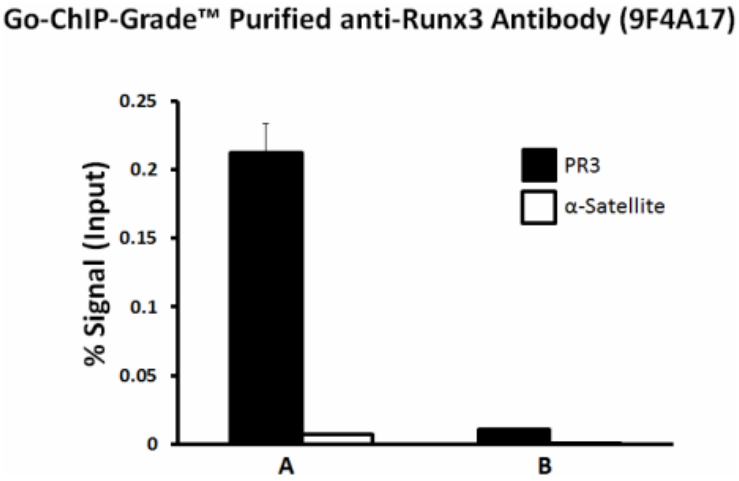
BioLegend's Tools for Chromatin Immunoprecipitation (ChIP) Assays - Video

Chromatin Immunoprecipitation (ChIP) Assay Protocol

Other Formats

Go-ChIP-Grade™ Purified anti-RUNX3

Product Data



Chromatin Immunoprecipitation (ChIP) was performed with cross-linked chromatin samples from 4 X 10^6 Jurkat cells with either A)1:50 dilution of Go-ChIP-Grade™ Purified anti-Runx3 (Clone 9F4A17, Cat. No. 653603) or B) equal amount of Purified Mouse IgG2a, κ Isotype Control Antibody (Clone MOPC-173, Cat. No. 400201) by using Go-ChIP-Grade™ Protein G Enzymatic Kit (Cat. No. 699904). The enriched DNA was purified and quantified by real-time qPCR using primers targeting human PR3 gene region or α-Satellite repeats. The amount of immunoprecipitated DNA in each sample is represented as signal relative to total amount of input chromatin.

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