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Product datasheet for TA347271

Retinoic Acid Receptor alpha (RARA) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	ChIP/ChIP-seq (4 µl/ChIP); ELISA (1:50); Western blotting (1:750)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-RARA antibody: human RARA (Retinoic Acid Receptor alpha) using two KLH-conjugated synthetic peptides containing sequences from the C-terminal region of the protein.
Concentration:	lot specific
Purification:	Whole antiserum from rabbit containing 0.05% azide.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	retinoic acid receptor alpha
Database Link:	NP_000955 Entrez Gene 5914 Human P10276
Background:	RARA (UniProtKB/Swiss-Prot entry P10276) is a receptor for retinoic acid, a vitamin A metabolite, which directly regulates gene expression in target cells by binding to specific DNA response elements. In the absence of its ligand, this receptor represses transcription through the recruitment of specific corepressors and of HDAC's, whereas binding of retinioc acid causes the recruitment of coactivators and HAT's. Translocations involving the RARA gene, often leading to a RARA/PML fusion protein, are a major cause of acute promyelocytic leukemia.
Synonyms:	NR1B1; RAR
Protein Families:	Druggable Genome, Nuclear Hormone Receptor, Transcription Factors

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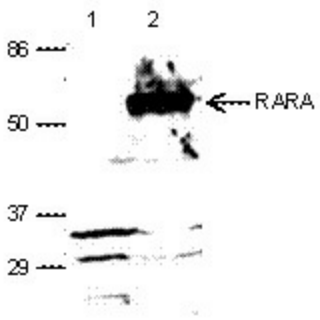
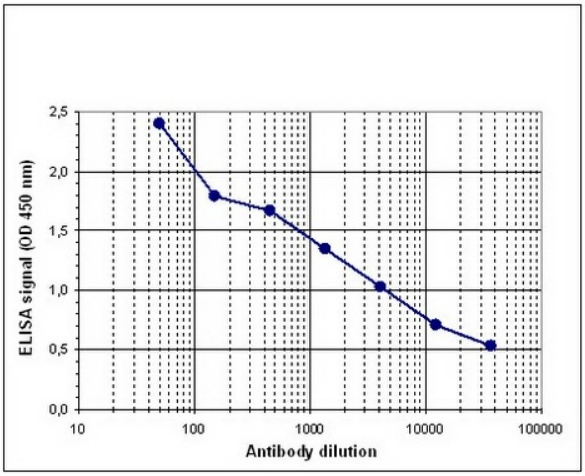
Protein Pathways: Acute myeloid leukemia, Pathways in cancer

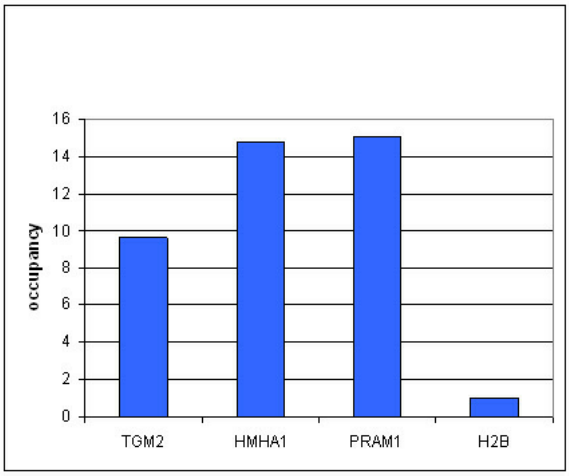
Product images:



WB using the antibody against RARA, diluted 1:750 in BSA/PBS-Tween. The molecular weight marker (in kDa) is shown on the left; the location of the protein of interest is indicated on the right.



Determination of the antibody titer To determine the titer of the antibody, an ELISA was performed using a serial dilution of the antibody against human RARA. The plates were coated with the peptides used for immunization of the rabbit. By plotting the absorbance against the antibody dilution (Figure 3), the titer of the antibody was estimated to be 1:2, 400.

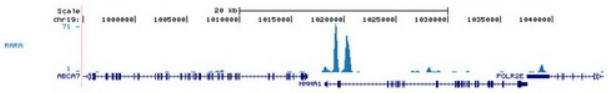


ChIP assays were performed using NB4 cells, the antibody against RARA and optimized primer pairs for qPCR. Sheared chromatin from 6 million cells and 4 ul of antibody were used per ChIP experiment. QPCR was performed using primers specific for the TGM2, HMHA1, PRAM1 and H2B genes. Image shows the relative occupancy, calculated as the ratio + control/background for which the second exon of the MB gene was used.

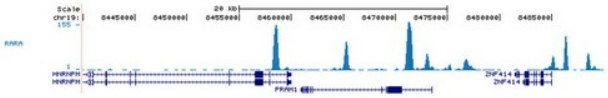
Figure 2

a) ChIP-seq signals on chromosome 19

b) 50 kb region on chromosome 19 surrounding the HMHA1 gene



b) 50 kb region on chromosome 19 surrounding the PRAM1 gene



a) ChIP-seq results obtained with the antibody against RARA ChIP was performed as described above and the IP'd DNA was analysed with an Illumina Genome Analyzer. Library preparation, cluster generation and sequencing were performed according to the manufacturer's instructions. The 32 bp tags were aligned to the human reference genome (hg18) using the ELAND algorithm. Image shows the results of the complete chromosome 19 and two 50 kb region surrounding the HMHA1 and PRAM1 genes, respectively.