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Polyclonal Antibody to RIN zinc finger protein (RINZF)/ZBTB10

Catalog No : **IMG-6224A**
Formulation : 100 ug in 200 ul PBS containing 0.05% BSA and 0.05% sodium azide. Sodium azide is highly toxic.
Isotype : Rabbit IgG
Purification : Protein G Chromatography
Species React : Chimpanzee, Human
Predicted React : Mouse
Host : Rabbit

Application
ELISA: 1:100-1:1000, see Mertens-Talcott (2007) for details.

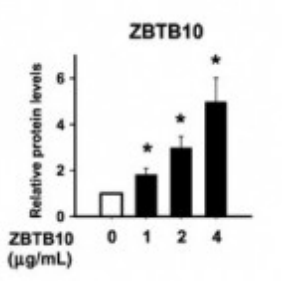
Storage
Store at 4°C, stable for 6 months. For long-term storage, aliquot and store at -20°C.

Background
RIN zinc finger protein (RINZF)/ZBTB10 is a novel zinc finger protein that inhibits Sp1-dependent activation. In this regard, ZBTB10 has been identified as a putative suppressor of Sp proteins such as Sp1, Sp3 and Sp4. Sp proteins belong to the Sp/Kruppel-like factor (KLF) family of transcription factors and are overexpressed in certain cancers. Overexpression of Sp proteins is thought to contribute to the proliferative and angiogenic phenotype associated with cancer cells. Although the underlying factors associated with high expression of Sp proteins is not well understood, it is thought that microRNAs (miRNA) may play a role in mediating their overexpression in cancer cells. Like Sp proteins, miRNA-27a (miR-27a) is widely expressed in certain cancer cells. MiR-27a suppresses ZB1B10 expression and suppression of ZBTB10 by overexpressed miR-27a may be linked to overexpression of Sp proteins in breast cancer cells (Mertens-Talcott et al, 2007). These authors showed that introduction of antisense miR-27a resulted in increased expression of ZBTB10 mRNA and decreased expression of Sp1, Sp3 and Sp4 mRNA and protein. It is thought that the oncogenic activity of miR-27a may be due, in part, to suppression of ZBTB10 which leads to increased expression of Sp proteins thereby contributing to the proliferative and angiogenic cancer phenotype. Principal Names: Zinc finger and BTB domain containing 10 Official Gene Symbol: ZBTB10 Gene ID: 65986 (Human) Gene Map Locus: 8q13-q21.1 (Human) RINZF is a novel member of the Cys2-His2 zinc finger gene family, having a cDNA sequence of 3.8 kilobases. Apart from the Cys2-His2 zinc finger domains, the RIN ZF coding sequence bears little resemblance to other reported zinc finger genes. The amino-terminal region of the protein is an activation domain, despite the lack of recognizable activation motifs, such as homopolymeric glutamine and proline-rich stretches. Instead, it possesses several regions rich in basic residues, often associated with repressor domains. The gene encoding the RINZF protein is mapped on human chromosome 8q13-q21.1. The protein is highly conserved and acts as a transcriptional regulator. The protein competes with Sp1 binding at the CACC cis-regulatory element of the gastrin promoter and thus has a down-regulatory effect on gastrin transcription. The existence of two transcript variants, isoform 1 and 2, produced by alternate splicing of the RINZF gene has been studied.

Antigen
Amino acids 62-77 (GADEEVELEGLEPQDL) of human RINZF protein were used as the immunogen.

Application Notes
The NCBI accession number for RINZF is Q96DT7. The amino acid sequence used as immunogen is 100% homologous in human and chimp and 88% homologous in mouse.

Genebank Info (Protein)
NP_079500



ELISA analysis of ZBTB10 expression. MDA-MB-231 cells were transiently transfected with 0-4 ug of a ZBTB10 expression plasmid and analyzed for ZBTB10 expression after 24 h. *Columns*, means for 3 replicate ELISAs. *Bars*, SE. *, $P < 0.05$.

Reference
1. Kashuba,V. Homo sapiens mRNA for zinc finger protein RINZF (RINZF gene). Unpublished (2001).
2. Tillotson et al. J Biol Chem 274: 8123-8128, 1999.

Product Citations

1. The oncogenic microRNA-27a targets genes that regulate specificity protein transcription factors and the G2-M checkpoint in MDA-MB-231 breast cancer cells.
Mertens-Talcott S, S Chintharlapalli, X Li, S Safe. *Cancer Research* 67: 11001-11011 (2007). **ELISA (MDA-MB-231 cells transfected with ZBT10 protein): Fig 4B (ZBT10 transfected validated).**

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