

DESCRIPTION

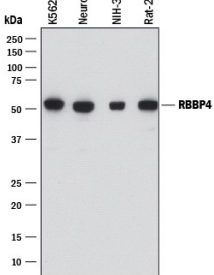
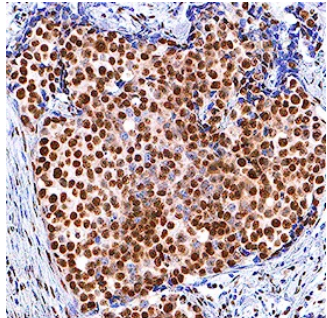
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human RBBP-4 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 968701
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human RBBP-4 Ala2-Ser425 Accession # 09028
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below
Immunohistochemistry	5 µg/mL	See Below

DATA

<p>Western Blot</p> 	<p>Detection of Human, Mouse, and Rat RBBP4 by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cell line, Neuro-2A mouse neuroblastoma cell line, NIH-3T3 mouse embryonic fibroblast cell line, and Rat-2 rat embryonic fibroblast cell line. PVDF membrane was probed with 0.5 µg/mL of Mouse Anti-Human/Mouse/Rat RBBP4 Monoclonal Antibody (Catalog # MAB7416) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for RBBP4 at approximately 52 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>RBBP4 in Human Breast Cancer Tissue. Retinoblastoma Binding Protein 4 (RBBP4) was detected in immersion fixed paraffin-embedded sections of human breast cancer tissue using Mouse Anti-Human/Mouse/Rat RBBP4 Monoclonal Antibody (Catalog # MAB7416) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to nuclei. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

RBBP4 (Retinoblastoma-Binding Protein 4; also RbAp48 and CAF-1) is a 48-56 kDa member of the WD Repeat RBAP46/48/MS11 family of proteins. It is ubiquitously expressed, and acts as a transcriptional repressor. At the start of G1 of the cell cycle, Rb (retinoblastoma protein) normally associates with an E2F transcription complex on E2F responsive genes, blocking E2F activity. At the appropriate time, Rb is phosphorylated, causing its dissociation from E2F and resulting in E2F activation. Dephosphorylated Rb apparently mediates transcriptional repression by recruiting a histone deacetylase (HDAC), followed by HDAC binding to RBBP4. RBBP4, being a histone-binding protein, now brings histones plus HDACs together, resulting in histone deacetylation and gene silencing. Human RBBP4 is 425 amino acids (aa) in length. It contains six WD repeats (aa 122-403), two N-terminal acetylation sites, and two serine phosphorylation sites at positions 110 and 146. There are at least two isoform variants. One contains a six aa substitution for aa 405-425, while another utilizes an alternative start site at Met36. Human and mouse RBBP4 are identical in aa sequence.