

DESCRIPTION

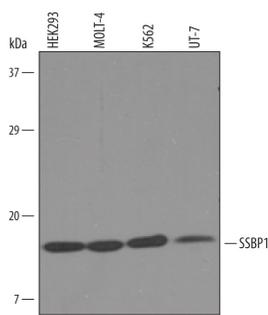
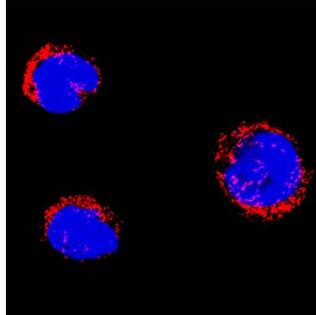
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| Species Reactivity | Human |
| Specificity | Detects human SSBP1 in direct ELISAs and Western blots. |
| Source | Polyclonal Sheep IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human SSBP1 Met1-Glu148 Accession # Q04837 |
| 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 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 | 1 µg/mL | See Below |
| Immunocytochemistry | 5-15 µg/mL | See Below |

DATA

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| <p>Western Blot</p>  <p>Detection of Human SSBP1 by Western Blot. Western blot shows lysates of HEK293 human embryonic kidney cell line, MOLT-4 human acute lymphoblastic leukemia cell line, K562 human chronic myelogenous leukemia cell line, and UT-7 human acute myeloid leukemia cell line. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human SSBP1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6588) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for SSBP1 at approximately 18 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p> | <p>Immunocytochemistry</p>  <p>SSBP1 in HL-60 Human Cell Line. SSBP1 was detected in immersion fixed HL-60 human acute promyelocytic leukemia cell line using Sheep Anti-Human SSBP1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6588) at 5 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.</p> |
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PREPARATION AND STORAGE

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| Reconstitution | Sterile PBS to a final concentration of 0.2 mg/mL. |
| 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 | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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

SSBP1 (Single-Stranded DNA –Binding Protein; also MtSSB and PWP1-interacting protein 17) is a 17-18 kDa member of the mtSSB protein family. SSBP1 should not be confused with SSB1/SSOS-B1. Although SSBP1 binds single-stranded mitochondrial DNA, it is not the product of a mitochondrial gene. Rather, it is synthesized on ribosomes in the cytosol, and undergoes transport into mitochondria via an N-terminal mitochondrial localization signal. After import, the localization motif is cleaved, allowing for homotetramerization. Upon DNA replication, SSBP1 is phosphorylated by CDK, allowing for DNA duplication. Human SSBP1 is 148 amino acids (aa) in length. It contains a cleavable mitochondrial targeting sequence (aa 1-16), an SSB domain (aa 30-141), one phosphorylation (Ser79) and one acetylation site (Lys113). There is one potential isoform that shows a 25 aa substitution for aa 135-148. Full-length human SSBP1 shares 92% aa identity with mouse SSBP1.