

#### DESCRIPTION

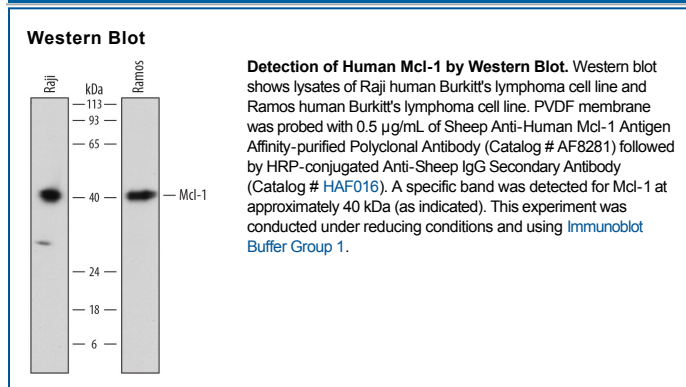
|                           |                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                   |
| <b>Specificity</b>        | Detects human Mcl-1 in direct ELISAs and Western blots.                                                                                                                                 |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                    |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                               |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Mcl-1<br>Val147-Gly219<br>Accession # Q07820                                                                                                  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*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.

|                     | <b>Recommended Concentration</b> | <b>Sample</b> |
|---------------------|----------------------------------|---------------|
| <b>Western Blot</b> | 0.5 µg/mL                        | See Below     |

#### DATA



#### PREPARATION AND STORAGE

|                                |                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reconstitution</b>          | Sterile PBS to a final concentration of 0.2 mg/mL.                                                                                                                                                                                                                                                                                                       |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C                                                                                                                       |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

#### BACKGROUND

MCL-1 (induced Myeloid Cell Leukemia differentiation protein 1; also Bcl2L3 and mcl1/EAT) is a 40-45 kDa member of the Bcl-2 family of proteins. It is widely expressed (in B cells, T cells, neutrophils and fibroblasts) and classified as a prosurvival Bcl-2 family member. Functionally, full-length MCL-1 sequesters the proapoptotic proteins Bak and Bax, rendering them inactive. It also delays cell-cycle progression by interacting with CDK1, CHK1 and PCNA. Human MCL-1 is a likely a 350 amino acid (aa) type II transmembrane protein. It contains a large cytoplasmic region (aa 1-327) plus a very short 2 aa C-terminal luminal segment. The cytoplasmic region has multiple domains, including a PEST (Pro/Glu/Ser/Thr)-like segment (aa 104-175), four ubiquitination sites, at least six utilized phosphorylation sites, and three Bcl2-like homology domains (aa 209-223; 252-272; 304-319). MCL-1 is known to form homodimers. There is one splice variant. It is 32-33 kDa in size and contains a 42 aa substitution for aa 230-350. This short form heterodimerizes with full-length MCL-1, rendering it incapable of interacting with Bak and Bax. MCL-1 also undergoes caspase processing. Cleavage after Asp127 generates 17 and 28-30 kDa fragments, while cleavage after Asp 157 generates 21 and 23-25 kDa fragments. These fragments give rise to a proapoptotic environment. Over aa 147-219, human MCL-1 shares 74% aa sequence identity with mouse Mcl-1.