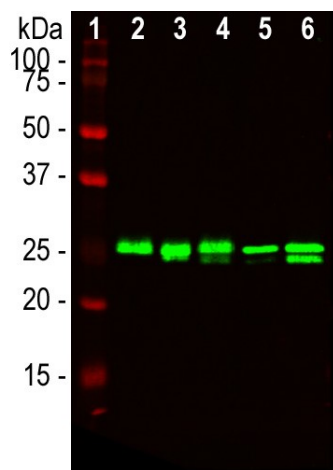


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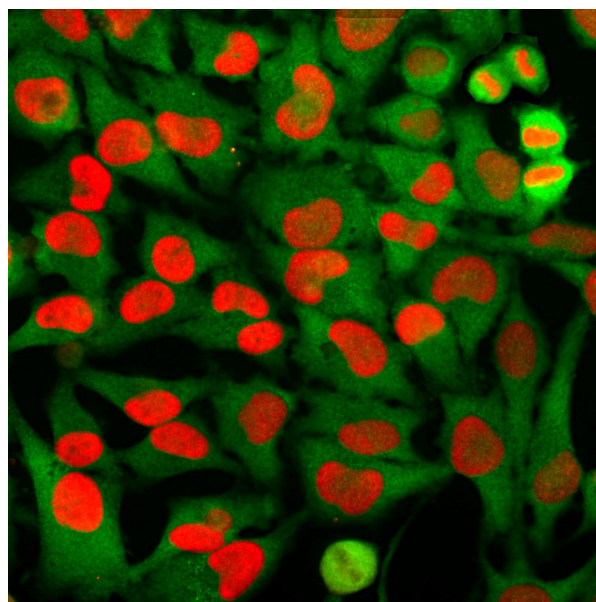
|                          |                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product name:</b>     | HMGB1                                                                                                                                                               |
| <b>Cat number:</b>       | MAB-94462                                                                                                                                                           |
| <b>Size:</b>             | 100 ug                                                                                                                                                              |
| <b>Clone:</b>            | 1F13                                                                                                                                                                |
| <b>Concentration:</b>    | 1mg/ml                                                                                                                                                              |
| <b>Host:</b>             | Ms                                                                                                                                                                  |
| <b>Isotype:</b>          | IgG2b                                                                                                                                                               |
| <b>Immunogen:</b>        | Human full length recombinant human HMGB1 protein expressed in and purified from E. coli                                                                            |
| <b>Reactivity:</b>       | Hu, Rt, Ms                                                                                                                                                          |
| <b>Applications:</b>     | Western Blot : 1:1,000-1:2,000 Immunofluorescence/Immunocytochemistry:<br>1:500-1:2,000 Immunohistochemistry (paraffin, formalin, frozen Tissues):<br>1:500-1:1,000 |
| <b>Molecular Weight:</b> | 25kDa                                                                                                                                                               |
| <b>Purification:</b>     | Purified                                                                                                                                                            |
| <b>Form:</b>             | Liquid                                                                                                                                                              |
| <b>Buffer:</b>           | Liquid in 50% PBS, 50% glycerol plus 5mM NaN <sub>3</sub>                                                                                                           |
| <b>Storage:</b>          | Storage for short term at 4°C recommended, for longer term at -20°C, minimize freeze/thaw cycles                                                                    |

**Background:**

High-mobility group proteins were named originally since they are abundant, relatively low molecular weight and exhibit “high mobility”, in other words, they run quickly on SDS-PAGE gels. High-mobility group proteins box 1 (HMGB1) is one of these. The “box” in the name refers to the so-called high mobility group box, a compact domain involved in DNA binding and protein-protein interactions. The HMGB1 molecule has two of these HMG domains (1). The protein is also called amphoterin, this name being derived from the presence of two highly charged regions in the molecule, a relatively neutrally charged N-terminus and a very negatively charged C-terminus. The molecule is very unusually charged throughout, the human sequence consisting of 16.7% Glutamic acid, 9.3% Aspartic acid, 20% Lysine and 9.3% Arginine. HMGB1 can bind toll like receptor 2, 4 and 9 (TLR2, TLR4 and TLR9) and the receptor for advanced glycation end products (RAGE), (3,4). TLRs are components of the innate immune system, first recognized as a family of receptors which recognize “pathogen associated molecular pattern” molecules or (PAMPs). These are common components of bacteria and when TLRs bind these, a strong inflammatory response is activated. More recently it has been recognized that TLRs can also be activated by “damage associated molecular pattern” molecules or (DAMPs), substances released from damaged and diseased cells which also bind to TLR family receptors and also activate inflammation. HMGB1 is such a DAMP, binding to TLR4, and much evidence suggests that HMGB1 is a strong activator of inflammation. Interestingly, HMGB1 is released by necrotic cells but not by apoptotic cells



Western blot analysis of lysates from different cell lines probed with mouse mAb to high mobility group protein B1, (HMGB1), dilution 1:2,000: [1] protein standard, [2] NIH-3T3, [3] C6, [4] HEK293, [5] HeLa, and [6] SH-SY5Y. The 25kDa band revealed by antibody corresponds to the HMGB1 protein.



Immunofluorescent analysis of HeLa cells stained with mouse mAb to HMGB1, dilution 1:2,000 in red and costained with rabbit pAb to GAPDH, dilution 1:2,000 in green. HMGB1 antibody stains the chromatin binding protein HMGB1, which is localized in the nuclei. In contrast the GAPDH antibody produces strong cytoplasmic staining of cell