



## Peninsula Laboratories, LLC

A Member of the Bachem Group

305 Old County Road, San Carlos, CA 94070

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### **Biotinylated Monoclonal Antibody To Mouse CD 71** **Marker For Mouse Transferrin Receptor**

Monoclonal antibody ER-MP21 stains proliferating cells of all types as well as cells taking up iron for special needs, such as late erythroid precursors and some mature macrophages. The antibody inhibits the iron uptake and the proliferation of macrophage precursors from bone marrow and early macrophage precursor cell lines. ER-MP21 recognizes the transferrin receptor but does not compete with transferrin binding.

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|-------------------------------|--|
| <b>Product Number:</b>        | T-2114   |
| <b>Clone:</b>                 | ER-MP21  |
| <b>Host species, isotype:</b> | Rat IgG2a  |
| <b>Quantity:</b>              | 200µg  |
| <b>Format:</b>                | Affinity purified, biotinylated, lyophilized<br><br>Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.1% sodium azide as a preservative.   |
| <b>Stability:</b>             | Original vial: 1 year at 4° - 8°C<br><br>Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.   |
| <b>Applications:</b>          | Tested for immunohistochemistry (IHC); has been described to work in FACS.<br><br><b>Approximate working dilution for IHC:</b><br>Frozen sections: 2µg/ml (1:200)<br>Paraffin sections: does not react on routinely processed paraffin sections.<br><br>Optimal dilutions should be determined by the end user.<br><br>Suggested positive control: Mouse spleen. |
| <b>Immunogen:</b>             | Macrophages precursor cells.   |
| <b>Antigen, epitope:</b>      | The antigen is a 200kDa protein (non-reducing conditions) consisting of two identical chains. The recognized epitope of the receptor is not located at the transferrin binding site.   |



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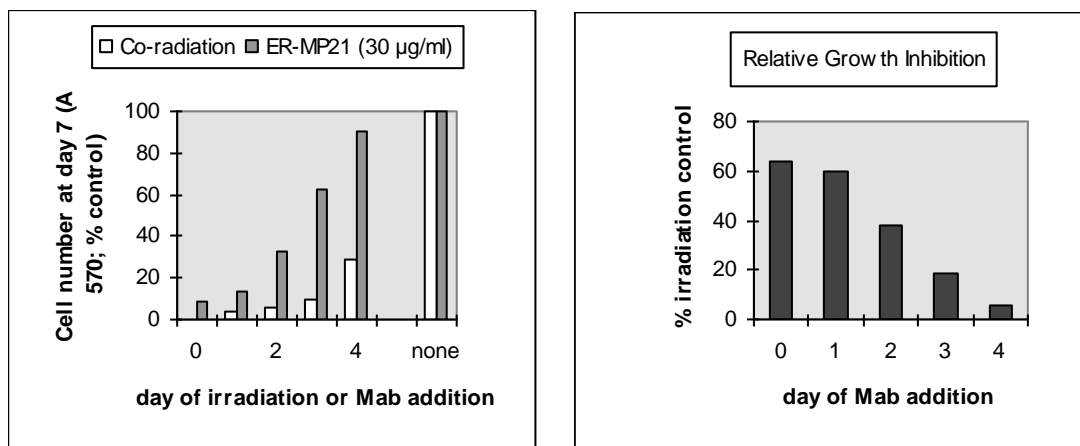
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### Antigen distribution:

*Differentiation stage-dependent inhibition of macrophage proliferation by ER-MP21 in M-CSF- stimulated bone marrow cultures.*



Macrophage progeny at day 7 in bone marrow cultures, treated in parallel on various days by irradiation (1500 rad  $^{60}\text{Co}$   $\gamma$ -radiation) or addition of ER-MP21 (30 µg/ml final concentration). Cell numbers were quantified using the MTT assay and expressed relative to untreated controls. Relative growth inhibition calculated from data represented in left figure. For mAb- or radiation treated cultures, the number of cell cycles needed to reach the cell number in untreated controls was calculated. Values obtained for irradiated cultures were taken as 100% inhibition controls and values for ER-MP21 - treated cultures were expressed relative to these.

### Specificity:

**Mouse:** transferrin receptor.

**Other species:** not tested.

### Selected references

Leenen P.J.M., et al. Differential Inhibition of Macrophage Proliferation by Anti-Transferrin Receptor Antibody ER-MP21: Correlation to Macrophage Differentiation Stage. *Exp. Cell Res.*: **189**: 55-63 (1990)

Brekelmans P., et al. Transferrin receptor expression as a marker of immature, cycling thymocytes in the mouse. *Cell. Immunol.* **159**: 331-339 (1994).

Brekelmans P., et al. Inhibition of proliferation and differentiation during early T cell development by anti-transferrin receptor antibody. *Eur. J. Immunol.* **24**: 2896-2902 (1994).

For in vitro research only. Caution: this product contains sodium azide, a poisonous and hazardous substance.