

Product datasheet for **BM4087B**

Tfrc Rat Monoclonal Antibody [Clone ID: ER-MP21]

Product data:

Product Type:	Primary Antibodies
Clone Name:	ER-MP21
Applications:	FC, IHC
Recommended Dilution:	Flow Cytometry (5 µg): Use 5 µl of the suggested dilution to label 10 ⁶ cells. Immunohistochemistry on Frozen Sections: 2 µg/ml (1/200). Does not react on routinely processed Paraffin Sections. <i>Suggested positive control:</i> Mouse spleen.
Reactivity:	Mouse
Host:	Rat
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Macrophages precursor cells.
Specificity:	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. The antigen is a 200 kD protein (non-reducing conditions) consisting of two identical chains. The recognized epitope of the receptor is not located at the transferrin binding site. Antigen Distribution: Macrophage progeny at day 7 in bone marrow cultures, treated in parallel on various days by irradiation (1500 rad ⁶⁰ Co γ-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 mAbor 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 (See Figure. 1).



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Formulation: Stock solution contains PBS, pH 7.2 with 0.09% Sodium Azide as preservative and 10 mg/ml BSA as stabilizer
 Label: Biotin
 State: Lyophilized purified Ig fraction

Reconstitution Method: Restore with 0.5 ml distilled water.

Concentration: 0.4 mg/ml (after reconstitution)

Purification: Affinity Chromatography

Conjugation: Biotin

Storage: Prior to reconstitution store at 2-8°C.
 Following reconstitution store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
 Avoid repeated freezing and thawing.

Stability: Shelf life: one year from despatch.

Gene Name: transferrin receptor

Database Link: [Entrez Gene 22042 Mouse Q62351](#)

Background: The transferrin receptor has been structurally characterized as a sulfide bound dimer of identical glycoprotein subunits of 95 kDa. The transferrin receptor is not present on resting blood lymphocytes. On PBL, the receptor appears after activation. The expression of transferrin receptor is coordinately regulated with cell growth. Present on T and B cell lines. The soluble (or serum) transferrin receptor (sTfR) is a circulating truncated form of the membrane receptor protein; it is an 85 kDa glycoprotein forming in serum a 320 kDa complex with diferric transferrin. The most important clinical use of the sTfR determination is in the differential diagnosis between iron deficiency anaemia and the anaemia of chronic disease.

Synonyms: TfR1, p90, Transferrin receptor protein 1

Product images:

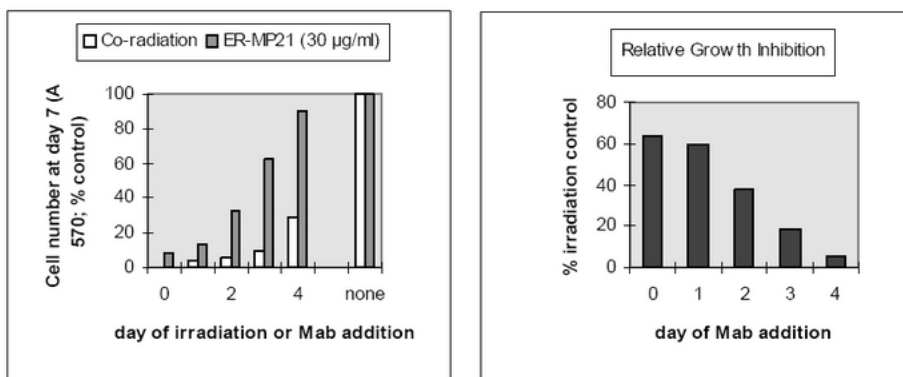


Figure 1. Differentiation stage-dependent inhibition of macrophage proliferation by ER-MP21 in MCSF-stimulated bone marrow cultures.