

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Mrc2 in direct ELISA.
Source	Monoclonal Mouse IgG _{2B} Clone # 1063704
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line, NS0-derived human Mrc2 Gly31-Ala1414 Accession # Q9UBG0
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was THP-1 human acute monocytic leukemia cell line.
-----------------------	--

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Mrc2 (C-type Mannose Receptor 2), also known as MMR2, Endocytic Receptor 180 and uPARAP, is a 180-kDa type I transmembrane protein. It is one of the mannose receptor (MR) family members which share a common domain organization and have a broad range of biological functions (1). Mrc2 is an endocytic receptor that is found on migrating cells, including cancer cells, macrophages, fibroblasts and endothelial cells (2). Mature human Mrc2 is composed of 1449 amino acid (aa) that includes a 1384 aa extracellular domain (ECD), a 21 aa transmembrane region, and a 44 aa cytoplasmic domain. The ECD shows one ricin B-type lectin domain, one fibronectin type II domain and eight C-type lectin domains. Within the ECD, human Mrc2 shares 91% aa identity with mouse and rat Mrc2. Mrc2 plays an important role in extracellular matrix remodeling through interaction with its ligands, including Man, Fuc, NAcGlc, collagens and urokinase plasminogen activator receptor (uPAR) (1-3). This cell surface molecule has been reported to promote cell invasion through matrix remodeling by internalizing large fragments of collagen and routing it to the lysosome for intracellular degradation and cell chemotaxis (2). It has also been reported to interact with matrix metalloproteinase-13 (MMP-13) and collagen V on the cell surface (4).

References:

1. Yuan, C. *et al.* (2016) *Biochem. J.* **473**:2359.
2. Durrel, T. *et al.* (2018) *Nat. Commun.* **9**:5178.
3. Behrendt, N. *et al.* (2000) *J. Biol. Chem.* **275**:1993.
4. Engleholm, L.H. *et al.* (2001) *Lab. Invest.* **81**:1403.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.