

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived mouse Mrc2 protein
Ala31-Ala1413, with a C-terminal 6-His tag
Accession # AAI16643.1

N-terminal Sequence Analysis Ala31

Predicted Molecular Mass 157 kDa

SPECIFICATIONS

SDS-PAGE 130-150 kDa, under reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Mouse Mrc2 His-tag (Catalog # 10491-EN) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Pro-Collagen I α1 (Catalog # 6220-CL) binds with an ED₅₀ of 0.03-0.36 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

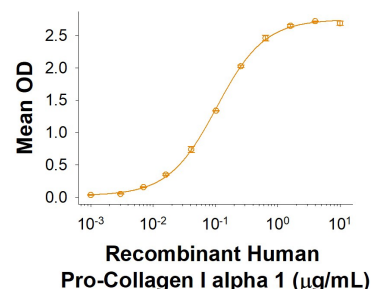
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

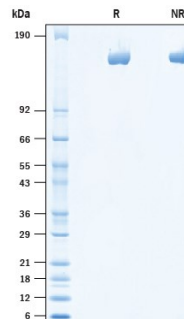
DATA

Binding Activity



When Recombinant Mouse Mrc2 His-tag (Catalog # 10491-EN) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human Pro-Collagen I α1 (Catalog # 6220-CL) binds with an ED₅₀ of 0.03-0.36 µg/mL.

SDS-PAGE



2 µg/lane of Recombinant Mouse Mrc2 His-tag (Catalog # 10491-EN) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® blue staining, showing bands at 145-165 kDa.

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 mouse Mrc2 is composed of 1449 amino acid (aa) that includes a 1383 aa extracellular domain (ECD), a 21 aa transmembrane region, and a 45 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, mouse Mrc2 shares 91% and 97% aa identity with human and rat Mrc2, respectively. 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 metalloprotease-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.