

DESCRIPTION

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| Source | Mouse myeloma cell line, NS0-derived mouse Mesothelin protein Gln36-Leu288, with a C-terminal 6-His tag Accession # Q61468.1 |
| N-terminal Sequence Analysis | Gln36 inferred from enzymatic pyroglutamate treatment revealing Thr37 |
| Structure / Form | Monomer |
| Predicted Molecular Mass | 29 kDa |

SPECIFICATIONS

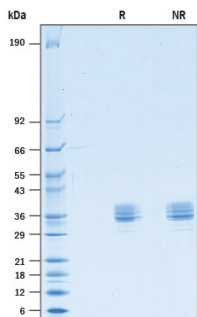
| | |
|------------------------|--|
| SDS-PAGE | 29-45 kDa, under reducing conditions |
| Activity | Bioassay data are not available. |
| Endotoxin Level | <0.10 EU per 1 µg of the protein by the LAL method. |
| Purity | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

PREPARATION AND STORAGE

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| 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 | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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

SDS-PAGE



Recombinant Mouse Mesothelin (aa 36-288) His-tag Protein SDS-PAGE 2 µg/lane of Recombinant Mouse Mesothelin (aa 36-288) His-tag Protein (Catalog # 10516-MS) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 29-45 kDa.

BACKGROUND

Mesothelin N-terminal, commonly known as Megakaryocyte Potentiating Factor (MPF), is a 31 kDa soluble protein that was originally identified in an PHC-Y5 culture system where it exhibited megakaryocyte potentiating activity (1). MPF is closely related to mesothelin (MSLN), a 40 kDa glycosylphosphatidyl inositol (GPI)-linked protein that is highly overexpressed in various types of cancer, such as mesothelioma, ovarian and pancreatic cancers (2). Both MPF and MSLN originate from a common 71 kDa precursor protein that harbors a furin cleavage site between amino acid residues 288-293. The 31 kDa soluble N-terminal MPF fragment is secreted into blood and the C-terminal 40 kDa fragment remains membrane-bound and classified as mature mesothelin (3). Mouse MPF is composed of residues 36-288 from the precursor protein and contains one N-linked glycosylation site (N93) and one phosphorylated serine (S202). Mouse MPF shares 56% and 84% sequence identity with human and rat MPF, respectively. It is expressed mainly in the heart and lungs (4) and can be upregulated in the presence of Wnt-1 (5). MSLN was shown to be capable of binding to cancer antigen 125/mucin16 (CA125/MUC16). Apart from its role as a megakaryocyte potentiating cytokine, MPF may have the potential to serve as a biomarker for detection and monitoring of malignant mesothelioma and related cancers (6).

References:

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2. Hassan R. *et al.* (2004) Clin. Cancer Res. **10**:3937.
3. Shiomi, K. *et al.* (2006) Cancer. Sci. **97**:928.
4. Bera T.K. Pastan I. (2000) Mol. Cell. Biol. **20**:2902.
5. Prieve M.G. Moon R.T. (2003) BMC Dev Biol. **3**:2.
6. Raiko, I. *et al.* (2017) Biochem. Biophys. Res. Com. **486**:526.