

Product Specification Sheet

**Multi Fusion-Tagged Protein Marker Protein contains 16 commonly used fusion tags**

- MFPM52-R-40** Multi Fusion-Tagged recombinant Protein 52-Kda containing 16-tags (T-7, HSV, C-myc, VSV-G, Glu-Glu, V5, e-tag, Flag, S-tag, HA, Kt3, E2, Au1, Au5, 6xHis tags) for ELISA  
**Size:** 40 ug **FORM:**  Soln  Lyophilized

Expression of genes in E. coli or yeast or baculovirus offers a convenient system to produce large amounts of recombinant proteins that may otherwise be difficult to isolate from natural cells and tissues. Very often antibodies to these newly identified proteins are not available to study its biochemical properties, monitor protein expression, and purification. In order to circumvent this problem, short pieces of well-defined peptides (**Poly-His, Flag-epitope or c-myc epitope or HA-tag**) or small proteins (**bacterial GST, MBP, Thioredoxin, b-Galactosidase, VSV-Glycoprotein etc**) are often cloned along with the target gene. Proteins are expressed as fusion proteins. Antibodies to these fusion-tags are already available to monitor fusion protein expression and purification. Therefore, fusion-tags serve as universal tags much like secondary antibodies. GST, HA-tag, C-myc, and His-tag are the most commonly used tags for recombinant fusion proteins.

A specially designed recombinant protein containing 16-commonly used fusion protein tags (**#MFPM52-C**, mol wt ~52 kda) was expressed in E. coli and semi-purified. Recombinant protein (52-kda) contains the following tags:

- Trx**
- T7-:** M-A-S-M-T-G-G-Q-Q-M-G
- HSV** QPE LAP EDP EDC
- c-Myc:** E-Q-K-L-I-S-E-E-D-L
- VSV-G:** Y-T-D-I-E-M-N-R-L-G-K
- Glu-Glu:** CEE EEY MPM E
- V5:** GKP IPN PLL GLD ST
- E-tag** GAP VPY PDP LEP R
- Flag:** DYK DDD DK
- S-tag** KET AAA KFE RQH MDS
- HA-Tag** Y-P-Y-D-V-P-D-Y-A-C
- KT3:** KPP TPP PEP ET
- E2:** GVS STS SDF RDR
- AU1:** DTY RYI
- AU5:** TDF YLK
- His-Tag:** -H-H-H-H-H-H

Purified multi-tag fusion protein (**#MFPM52-R-40**) is supplied in a stabilizing buffer containing 0.1% Mannitol as powder or in PBS buffer (or see lot sp. conc on the vial). Store powder at 4oC for 6-12 months. Reconstitute powder in water and store frozen at -20oC or below in suitable size aliquots. Do not freeze and thaw.

**Suggested usage**

**ELISA**

Reconstitute powder in 100 ul PBS or other buffers for application such as ELISA and use 1-10 ul/ml for coating. After reconstitution, store stock solution at -20oC in suitable size aliquots. It may be necessary to optimize coating concentration for reaction with a given anti-tag antibodies (His-tag, Myc-tag, HA-tag, T7-tag or VSV-Glycoprotein tags).

**Western blots**

Reconstitute powder in 1x 100 ul SDS-PAGE reducing buffer. Load 1-5 ul per lane for probing with most anti-tag antibodies. If loading <5 ul of the stock, it is advisable to add 1X SDS-PAGE sample buffer to make up 5-10 ul loading volume per lane for better resolution. **#MFPM52-C** will produce a major somewhat diffuse band at ~52 Kda. After reconstitution, store stock solution at -20oC in suitable size aliquots. It may be necessary to optimize loading volume (1-5 ul/lane) depending upon the anti-tag antibody ((His-tag, Myc-tag, HA-tag, T7-tag or VSV-Glycoprotein tags).

ADI also has other recombinant protein containing a single tag:

- #MYC11-C**, Recombinant Myc-tag-Protein (~9 kda) WB control
- #HA11-C**, Recombinant HA-tag -Protein (~9 kda) WB +ve control
- #HISP11-C**, Recombinant his-tag -Protein (~9 kda) WB +ve control
- #GST12-C**, Recombinant purified Glutathione Transferase (GST)-Protein (~27 kda) control WB +ve control
- #FLAG12-C** Recombinant purified FLAG tag-Protein (~9 kda) control WB +ve control

Antibodies to various tags are also available (see web site for complete listing).

**General References:** Harlow E & Lane (1988) Antibodies: A lab manual, Cold Spring Harbor, NY; Smith DB (1988) Gene 67, 31-40; Stuber D (1990) Immunological Methods IV, AP, 121-152; Kolodziej PA (1991) Methods Enzymol. 194, 508-511; Zentgraf H (1995) Nucl Acid Res. 23, 3347-3348

All products are for in Vitro Research Use only.

**Other Fusion tag antibodies available from ADI**  
Anti-MBP, Poly-His, GST, beta-Gal, VSV-G, Flag, HA-tag, and c-myc

**Western Blot Recycling Kit (Strips blots in 5 minutes)** and re-use the same blot with multiple antibodies

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