

# Recombinant Full Length Human A2M Protein, C-Flag-tagged

**Cat. No.** A2M-1097HFL    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Full Length Human A2M Protein, fused to Flag-tag at C-terminus, was expressed in Mammalian cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | Mammalian Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | The protein encoded by this gene is a protease inhibitor and cytokine transporter. It uses a bait-and-trap mechanism to inhibit a broad spectrum of proteases, including trypsin, thrombin and collagenase. It can also inhibit inflammatory cytokines, and it thus disrupts inflammatory cascades. Mutations in this gene are a cause of alpha-2-macroglobulin deficiency. This gene is implicated in Alzheimer's disease (AD) due to its ability to mediate the clearance and degradation of A-beta, the major component of beta-amyloid deposits. A related pseudogene, which is also located on the p arm of chromosome 12, has been identified. |
| <b>Form</b>             | 25 mM Tris HCl, pH 7.3, 100 mM glycine, 10% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Molecular Mass</b>   | 160.8 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>AA Sequence</b>      | MGKNKLLHPSLVLLLLVLLPTDASVSGKPQYMLVPSLLHTETTEKGCVLLSYLNETV<br>TVSASLESVRGN RSLFTDLEAENDVLHCVAFAVPKSSSNEEVMFLTVQVKGPTQEF<br>KKRTTVMVKNEDSLVFVQTDKSIYKP GQTVKFRVVSMDENFHPLNELIPLVYIQDPK<br>GNRIAQWQSFQLEGGLKQFSFPLSSEPFQGSYKVVVQKK SSGRTEHPFTVEEFVL<br>PKFEVQVTVPKIITILEEEMNVSVCGLYTYGKPVPGHVTVSICRKYS DASDCHG EDS                                                                                                                                                                                                                                                                                                                                      |

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QAFCEKFSGQLNSHGCFYQQVKTQVFQLKRKEYEMKLHTEAQIQEEGTVVELTGRQ  
 SSEITRTITKL SFVKVDShFRQGIPFFGQVRLVDGKGVPINPKVIFIRGNEANYYSNAT  
 TDEHGLVQFSINTTNVMGTSLT VRVNYKDRSPCYGYQWVSEEHEEAHTAYLVFS  
 PSKSFVHLEPMSHELPCGHTQTVQAHYILNGGTLLGL KKLsfyyLIMAKGGIVRTGT  
 HGLLVKQEDMKGHFSISIPVKSADIAPVARLLIYAVLPTGDVIGDSAKYDV ENCLANKV  
 DLSFSPSQSLPASHAHLRVTAAPQSVCALRAVDQSVLLMKPDAELSASSVYNLLPEK  
 DLTGF PGPLNDQDDEDCINRHNVIYINGITYTPVSSTNEKDMYSFLEDMGLKAFTNSK  
 IRKPKMCPQLQQYEMHGP EGLRVGFYESDVMGRGHARLVHVEEPHTETVRKYFPE  
 TWIWDLVVNSAGVAEVGVTPDITTEWKAGAF CLSEDAGLGISSTASLRAFQPPFFV  
 ELTMPYSVIRGEAFTLKATVLNLYPKCIRVSVQLEASPAFLAVPVE KEQAPHICANG  
 RQTVSWAVTPKSLGNVNFTVSAEALESQELCGTEVPSVPEHGRKDTVIKPLLVEPE  
 GL EKETTFNSLLCPSGGEVSEELSLKLPPNVVEESARASVSVLGDILGSAMQNTQNL  
 LQMPYGCGEQNMVLF APNIYVLDYLNQQLTPEVKSKAIGYLNTGYQRQLNYKH  
 DGSYSTFGERYGRNQGNTWLTAFVLKTFA QARAYIFIDEAHITQALIWLSQRQKDN  
 GCFRSSGSLNNAIKGGVEDEVTL SAYITIALLEIPLTVTHPV VRNALFCLESAWKTA  
 QEGDHGSHVYTKALLAYAFALAGNQDKRKEVLKSLNEEA VKKDN SVHWERPQKPK  
 APVGHFYEPQAPSAEEMTSYVLLAYLTAQPAPTS EDTLSATNIVKWITKQNAQGG  
 FSSTQDTVVALHA LSKYGAATFTRTGKAAQVTIQSSGTFSSKFQVDNNRLLLQV  
 SLPELPGEYSMKVTGEGCVYLQTSKY NILPEKEEFPFALGVQTLPTCDEPKAHTS  
 FQISLSVSYTGSRSASNMAIVDKMVSGFIPLKPTVKMLE RSNHVS RTEVSSNHVLIY  
 LDKVSNQTL SLFFTVLQDVPVRDLKPAIVKVYDYYETDEFAIAEYNAPCSKD  
 LGNATRTRPLEQKLISEEDLAANDILDYKDDDDKV

|                  |                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>    | > 80% as determined by SDS-PAGE and Coomassie blue staining.                                                                                  |
| <b>Stability</b> | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles. |
| <b>Storage</b>   | Store at -80 centigrade.                                                                                                                      |

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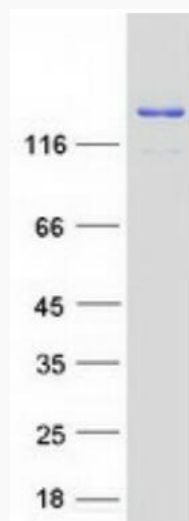
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|                         |                                                                                                                  |
|-------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Concentration</b>    | >50 ug/mL as determined by microplate BCA method.                                                                |
| <b>Preparation</b>      | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps. |
| <b>Protein Families</b> | Druggable Genome, Secreted Protein                                                                               |
| <b>Protein Pathways</b> | Complement and coagulation cascades                                                                              |
| <b>Full Length</b>      | Full L.                                                                                                          |
| <b>GENE INFORMATION</b> |                                                                                                                  |
| <b>Gene Name</b>        | A2M alpha-2-macroglobulin [ Homo sapiens (human) ]                                                               |
| <b>Official Symbol</b>  | A2M                                                                                                              |
| <b>Synonyms</b>         | A2MD; CPAMD5; FWP007; S863-7                                                                                     |
| <b>Gene ID</b>          | 2                                                                                                                |
| <b>mRNA Refseq</b>      | NM_000014.6                                                                                                      |
| <b>Protein Refseq</b>   | NP_000005.3                                                                                                      |
| <b>MIM</b>              | 103950                                                                                                           |
| <b>UniProt ID</b>       | P01023                                                                                                           |

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Coomassie blue staining of purified A2M protein.

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