

## Product Datasheet

### A2M Antibody / Alpha-2-Macroglobulin (orb1825827)

**Catalog Number** orb1825827

**Description** Alpha-2-Macroglobulin (Alpha-2M) is a homotetrameric serum protein consisting of four identical subunits that form dimers through disulfide bonds. Initially, Alpha-2M was characterized as a pan-proteinase inhibitor that was able to bait proteinases into cleaving specific peptide sequences on Alpha-2M. This interaction induces a conformational change in Alpha-2M, thus enabling it to trap the proteinase and further inhibit its activity. Subsequently, Alpha-2M has been shown to function as a carrier protein and regulator of cytokines during inflammation. Circulating transforming growth factor beta (TGFbeta) in serum is primarily bound to Alpha-2M, which renders TGFbeta inactive. Alpha-2M also binds to IL-6 and, thereby, increases the concentration of IL-6 near lymphocytes, hepatocytes and stem cells involved in mediating the inflammatory cascade. Mutations and deletions in the gene encoding Alpha-2M are associated with an increased incidence of Alzheimer s disease (AD), which is consistent with the role of Alpha-2M in mediating the clearance and degradation of A beta, the major component of beta-Amyloid deposits accumulated during AD.

**Species/Host** Mouse

**Reactivity** Human

**Conjugation** Unconjugated

**Tested Applications** IHC-P

**Immunogen** A recombinant partial protein sequence (within amino acids 604-748) from the human protein was used as the immunogen for the Alpha-2-Macroglobulin antibody.

**Storage** Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Note** For research use only

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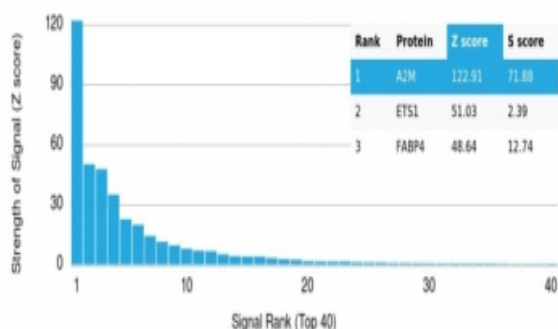
#### Biorbyt Ltd.

7 Signet Court, Swann's Road,  
Cambridge, CB5 8LA, United Kingdom  
Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
Phone: [+44 \(0\) 1223 859-353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

#### Biorbyt LLC.

68 TW Alexander Drive,  
Durham, NC, 27713, United States  
Email: [info@biorbyt.com](mailto:info@biorbyt.com), [support@biorbyt.com](mailto:support@biorbyt.com)  
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<b>Formula</b>	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide
<b>Isotype</b>	Mouse IgG2b, kappa
<b>Clonality</b>	Monoclonal
<b>Clone Number</b>	A2M/4849
<b>Antibody Type</b>	Primary Antibody
<b>Uniprot ID</b>	<b>P01023</b>
<b>Hazard Information</b>	This Alpha-2-Macroglobulin antibody is available for research use only.
<b>Dilution Range</b>	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
<b>Expiration Date</b>	12 months from date of receipt.



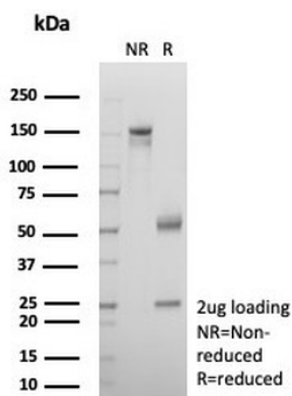
Analysis of a HuProt (TM) microarray containing more than 19000 full-length human proteins using Alpha-2-Macroglobulin antibody (clone A2M/4849). Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt (TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt (TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a mAb to its intended target. A mAb is considered to specific to its intended target, if the mAb has an S-score of at least 2.5. For example, if a mAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that mAb to protein X is equal to 29.

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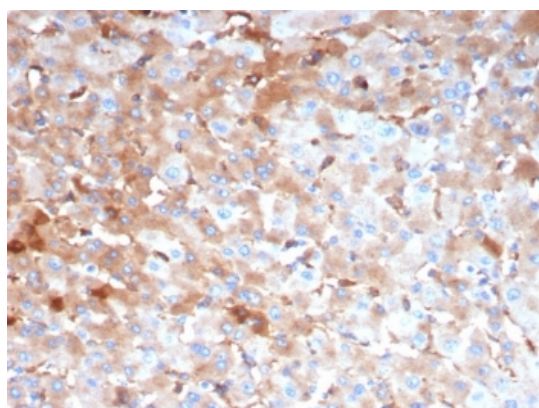
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Phone: [+44 \(0\) 1223 859-353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

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SDS-PAGE analysis of purified, BSA-free Alpha-2-Macroglobulin antibody (clone A2M/4849) as confirmation of integrity and purity.



IHC staining of FFPE human hepatocellular carcinoma tissue with Alpha-2-Macroglobulin antibody (clone A2M/4849). HIER: boil tissue sections in pH9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.

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Phone: [+44 \(0\) 1223 859-353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

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