Rat α1-Microglobulin Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 771803

Catalog Number: FAB7720T

100 µg

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat α1-Microglobulin in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human α1-Microglobulin is observed.
Source	Monoclonal Mouse IgG_1 Clone # 771803
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant rat α1-Microglobulin Asp20-Ala202 Accession # Q64240
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Rat α1-Microglobulin (alpha1-m/A1M; also protein HC) is a secreted 25-26 kDa glycoprotein member of the lipocalin family, calycin superfamily of molecules. It is expressed by hepatocytes, keratinocytes, and endodermal derivatives in the embryo. α1-Microglobulin appears to act as a heme scavenger, protecting cells and collagen against oxidative damage. It also acts as an immunosuppressant, inhibiting polyclonal lymphocyte activation and dampening granulocyte migration in response to chemokines. α1-Microglobulin circulates either as a monomer, or bound to IgA, albumin or prothrombin. Rat α1-Microglobulin is generated through cleavage of a precursor molecule termed AMBP. This AMBP should not be confused with AMBP-1, a 120-140 kDa adrenomedullin-binding protein that is also known as Complement Factor H. The AMBP precursor contains a 19 aa signal sequence, an N-terminal 183 aa α1-Microglobulin protein (aa 20-202), and a C-terminal serine protease inhibitor termed bikunin (aa 205-349). α1-Microglobulin possesses one lipocalin domain (aa 41-186). Although cleavage of AMBP in the Golgi apparatus typically generates a 25 kDa α1-Microglobulin and 28 kDa bikunin molecule, the 55-65 kDa AMBP precursor can also be released intact. In human, α1-Microglobulin will undergo extracellular processing, generating an isoform that is missing the C-terminal four amino acids. There are four potential isoform variants. One utilizes an alternative start site at Met181, a second contains an Asn substitution for aa 112-228, a third possesses an 11 aa substitution for aa 1-141, and a fourth shows a 17 aa substitution for aa 201-349. Over aa 20-202, rat α1-Microglobulin shares 76% and 86% aa sequence identity with human and mouse α1-Microglobulin, respectively

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