

PRODUCT INFORMATION



β 2-Microglobulin (dog, recombinant)

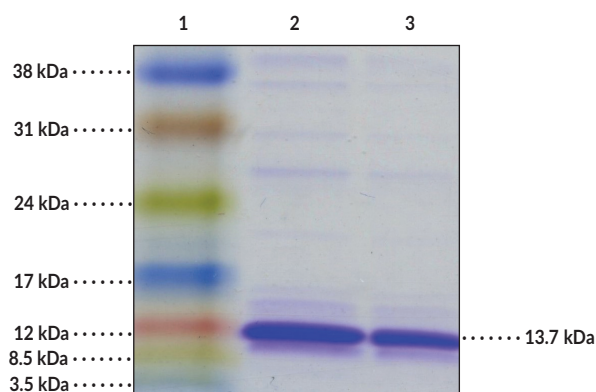
Item No. 29555

Overview and Properties

Synonyms: IMD43, β 2M, β 2-Microglycoprotein
Source: Recombinant N-terminal His-tagged dog β 2-microglobulin (28-125) expressed in *E. coli*
Amino Acids: 28-125
Uniprot No.: E2RN10
Molecular Weight: 13.74 kDa
Storage: -80°C (as supplied)
Stability: \geq 1 year
Purity: *batch specific* (\geq 85% estimated by SDS-PAGE)
Supplied in: 50 mM HEPES, pH 8.0, with 150 mM sodium chloride and 10% glycerol
Protein Concentration: *batch specific* mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: β 2-Microglobulin (4 μ g)
Lane 3: β 2-Microglobulin (2 μ g)

Figure 1: SDS-PAGE analysis of β 2-Microglobulin

Representative gel image shown; actual purity may vary between each batch.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

β 2-Microglobulin is a 98-amino acid protein and the light chain component of major histocompatibility complex (MHC) class I molecules.^{1,2} It is non-covalently associated with the MHC class I α chain and comprises a protein-building subunit of the MHC class I molecule to facilitate complex transport to the cell surface and antigen presentation to cytotoxic T cells. β 2-Microglobulin is found in all nucleated cells, as well as in extracellular fluids, including urine and serum, and MHC class I-associated β 2-microglobulin exhibits dissociation and equilibrium exchange with circulating soluble β 2-microglobulin.^{1,3} Germline mutations at the β 2-microglobulin exon 1/intron 1 splice site have been found in dog mammary gland simple and complex carcinoma tumor samples.⁴

References

1. Nomura, T., Huang, W.-C., Zhau, H.E., *et al.* β 2-Microglobulin-mediated signaling as a target for cancer therapy. *Anticancer Agents Med. Chem.* **14(3)**, 343-352 (2014).
2. Nakajima, Y., Hoshi, F., Higuchi, S., *et al.* The complete amino acid sequence of dog β 2-microglobulin. *J. Vet. Med. Sci.* **61(5)**, 517-521 (1999).
3. Nakajima, Y., Hoshi, F., Higuchi, S., *et al.* Determination of canine β 2-microglobulin in plasma and urine by enzyme-linked immunosorbent assay. *J. Vet. Med. Sci.* **63(3)**, 343-345 (2001).
4. Tanaka, T., Shimada, T., Akiyoshi, H., *et al.* Germline polymorphism at the β 2-microglobulin exon 1/intron 1 splice site in canine mammary gland simple and complex carcinomas. *Vet. Rec.* **172(20)**, 529 (2013).

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