

## Product datasheet for **SM1804P**

### Granzyme B (GZMB) Mouse Monoclonal Antibody [Clone ID: GB7]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	GB7
Applications:	IHC, WB
Recommended Dilution:	<b>Western blot.</b> <b>Immunohistochemistry on Paraffin Sections:</b> 1/50-1/200. Requires antigen retrieval using heat treatment with Sodium Citrate buffer pH 6.0.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Recombinant Granzyme B. Spleen cells from immunised Balb/c mice were fused with cells of the mouse SP2/0 myeloma cell line
Specificity:	This antibody recognizes the serine protease Granzyme B, which is important in the induction of apoptosis in target cells by cytolytic lymphocytes (CTLs).
Formulation:	TRIS buffered saline, pH 8.0 State: Purified State: Liquid purified IgG fraction from Tissue Culture Supernatant Preservative: 0.01% Thiomersal
Concentration:	lot specific
Purification:	Affinity Chromatography on Protein A
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	granzyme B
Database Link:	<a href="#">Entrez Gene 3002 Human P10144</a>



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**Background:**

Granzyme A and Granzyme B are serine proteases that mediate apoptotic signaling in cytotoxic T lymphocytes (CTL) and natural killer (NK) cells. Both granzyme A and granzyme B are synthesized as inactive proenzymes, and they are stored within cytolytic granules and released by effector cells during degranulation. In activated CTLs, granzyme A and granzyme B are processed and activated by cathepsin C, and they then function to induce apoptosis by two distinct pathways.

Granzyme B proteolytically cleaves and activates members of the caspase family of cysteine proteases, including caspase-3, caspase-6, caspase-7 and caspase-9. When cleaved, these caspases assemble into active holoenzymes that then mediate apoptosis through a defined proteolytic cascade involving nuclear lamins and PARP (poly ADP ribose polymerase).

Granzyme A mediates the activation of apoptosis by inducing single-strand DNA breaks, membrane perturbation and nuclear condensations in an alternative pathway that is independent from caspase activation or the caspase proteolytic cascade.

**Synonyms:**

Granzyme-2, CGL1, CTSSL1, CSPB, CTLA1, CTLA-1, GRB, SECT, Fragmentin-2