

DESCRIPTION

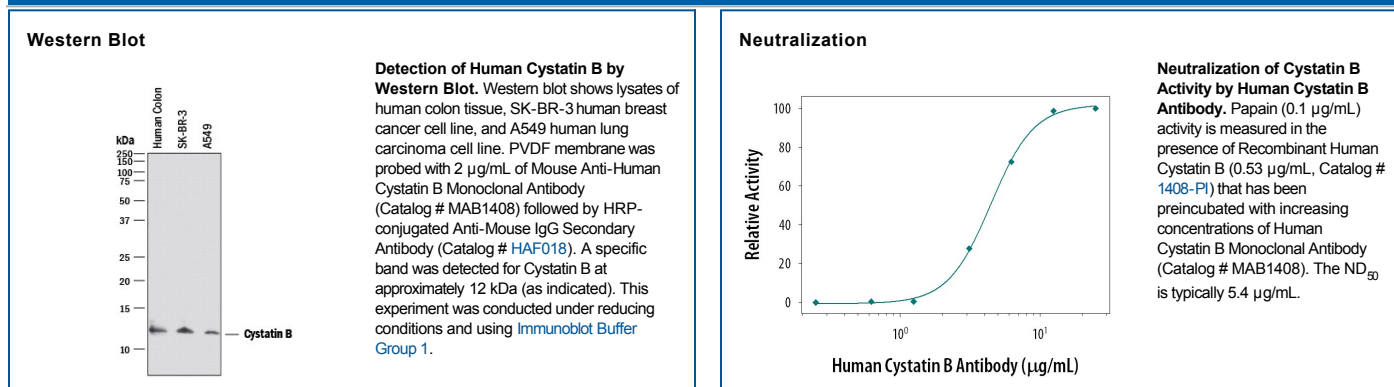
Species Reactivity	Human
Specificity	Detects human Cystatin B in Western blots and direct ELISAs. In Western blots, less than 5% cross-reactivity with recombinant human (rh) Cystatins A and S, recombinant mouse Cystatin B, rhFetuin A, and rhHPRG (Histidine-Proline-Rich Glycoprotein) is observed and approximately 5% to 10% cross-reactivity with rhCystatins C, D, E/M, SA, SN, and rhFetuin B is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 225228
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Cystatin B aa Met2-Phe98 Accession # P04080
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Cystatin B (Catalog # 1408-PI), see our available Western blot detection antibodies
Neutralization		Measured by its ability to neutralize Recombinant Human Cystatin B (0.53 µg/mL, Catalog # 1408-PI) inhibition of Papain (0.1 µg/mL) cleavage of the fluorogenic peptide substrate Z-FR-AMC (100 µM, Catalog # ES009). The Neutralization Dose (ND ₅₀) is typically 5.4 µg/mL.

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Cystatin B, also called stefin B or liver thiol proteinase inhibitor, is a member of family 1 of the cystatin superfamily (1). Like Cystatin A, it is an intracellular inhibitor regulating the activities of cysteine proteases of the papain family such as cathepsins B, H and L (2). Mutations in the Cystatin B gene is the cause of progressive myoclonus epilepsy (EPM1) (3). Because of its expression patterns, Cystatin B can be used as a marker for certain cancers, such as glioblastoma tumors (4). It readily forms amyloid fibrils *in vitro* (5). The human Cystatin B consists of 98 amino acid residues (3).

References:

1. Abrahamson, M. (1994) *Methods Enzymol.* **244**:685.
2. Pol, E. and I. Bjork (1999) *Biochemistry* **38**:10519.
3. Pennacchio, L.A. *et al.* (1996) *Science* **271**:1731.
4. Zhang, R. *et al.* (2003) *Glia* **42**:194.
5. Zerovnik, E. *et al.* (2002) *Biochim. Biophys. Acta* **1594**:1.