ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Cathepsin G, Human Neutrophil

□ Cat. # CTHG20-N-25 Purified human cathepsin G (Neutrophil) **SIZE**: 25 ug

Cathepsins are proteases: proteins that break apart other proteins, found in many types of cells including those in all animals. There are approximately a dozen members of this family (designated Cathepsin A-E, G, H, K, L, S, V etc), which are distinguished by their structure, catalytic mechanism, and which proteins they cleave. Most of the members become activated at the low pH found in lysosomes. Thus, the activity of this family lies almost entirely within those organelles. Cathepsins have a vital role in mammalian cellular turnover, e.g. bone resorption. They degrade polypeptides and are distinguished by their substrate specificities.

Cathepsin G, is an enzymatic protein belonging to the peptidase or protease families. In humans, it is coded by the CTSG gene.

The protein encoded by this gene, a member of the peptidase S1 protein family, is found in azurophil granules of neutrophilic polymorphonuclear leukocytes. The encoded protease has a specificity similar to that of chymotrypsin C, but it is most closely related to other immune serine proteases, such as neutrophil elastase and the granzymes. Cathepsin G may participate in the killing and digestion of engulfed pathogens, and in connective tissue remodeling at sites of inflammation. It also localizes to Neutrophil extracellular traps (NETs), via its high affinity for DNA, an unusual property for serine proteases. Transcript variants utilizing alternative polyadenylation signals exist for this gene.

Source of Antigen

Human cathepsin G purified from human neutrophils using proprietary biochemical methods (Purity: >= 95% by SDS-PAGE, Mol wt 23.5 Kda). It is supplied in a de-ionized water or lyophilized in the same buffer. Lot sp. concn are specified on the vial.

All human derived material has been tested negative for HIV, HCV, and HbSAg. Nevertheless, all precautions should be taken and samples be treated as potentially hazardous.

Extinction Coefficient (E) =0.664

Activity: 2 to 4 units per mg protein. One unit of activity is denied as the amount of enzyme that hydrolyzes one micromole of Suc-ala-ala-pro-phe-pNA (1mM) per minute at 25o C in 160 mM Tris-HCl, pH 7.4, with 1.6 M NaCl.

Recommended Usage

ELISA, Western

References: Shi GP (1992) JBC 267, 7258; Wiederanders B (1992) JBC 267, 13708; Lemere CA (1995) Am. J. Pathol.. 146, 848; Shi GP (1994) JBC 269, 11530;

*This product is for In vitro research use only.

Related material available from ADI

Catalog#	Prod. Description
CTHB11-A	Anti-Human Liver Cathepsin B IgG
CTHB11-C	Human Liver Cathepsin B protein control for Western blot
CTHB15-N-25	Cathepsin B, Human Liver
CTHD11-A	Anti-Human Liver Cathepsin D IgG
CTHD17-N-25	Cathepsin D, Human Liver
CTHG11-A	Anti-Human Neutrophil Cathepsin G IgG
CTHG20-N-25	Cathepsin G, Human Neutrophil
CTHH11-A	Anti-Human Liver Cathepsin H IgG
CTHH21-N-25	Cathepsin H, Human Liver
CTHL11-A	Anti-Human Liver Cathepsin L IgG
CTHL22-N-25	Cathepsin L, Human Liver
CTHS23-A	Anti-human Cathepsin S IgG
CTHS23-N-25	Cathepsin S, Human Spleen
RP-759	Recombinant (E.Coli) Human Cathepsin-D
RP-870	Recombinant Human Procathepsin K
RP-928	Recombinant (E.Coli) Human Cathepsin-L

SP-100801-5 Cathepsin G (77 - 83) (AA: His-Pro-Gln-Tyr-Asn-Gln-Arg)

SP-100802-2 Cathepsin S substrate (AA: Ac-Lys-Gln-Lys-Leu-Arg-AMC)

CTHS24-N-10 Recombinant (HEK) Human Cathepsin S protein (>95%, his-tag ow endotoxins)

CTHB16-N-10 Recombinant (HEK) Cathepsin B (CTSB/APPS/CPSB) (18-339aa; >95%, his-tag, low endotoxins)

CTSD18-N-10 Recombinant (HEK) Cathepsin D (CTSD) (full length, >95%, his-tag, low endotoxins)

CTHL23-N-10 Recombinant (HEK) Cathepsin L1 (CTSl1 (18-333, length, >95%, his-tag, low endotoxins)

CTHL24-N-10 Recombinant (HEK) Cathepsin L2 (Cathepsin V) (18-384, full length, >95%, his-tag, low endotoxins)

CTSZ31-N-10 Recombinant (HEK) Cathepsin Z/P (CTSZ) (24-303, full length, >95%, his-tag, low endotoxins)

CTHG20-N-25-Human-Cathepsin-G 150911SV

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