# SANTA CRUZ BIOTECHNOLOGY, INC.

# HMSD (Y-18): sc-243035



The Power to Question

### BACKGROUND

The serine proteinase inhibitors (serpins) comprise a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. HMSD (histocompatibility (minor) serpin domain containing), also known as ACC-6 or C18orf53, is a 139 amino acid secreted protein that belongs to the serpin family. Highly expressed in dendritic cells and primary leukemia cells, HMSD is a putative serine protease inhibitor. The gene encoding HMSD maps to human chromosome 18q22.1; single-nucleotide polymorphisms to this gene results in a second isoform, designated HMSD-v, which induces expression of minor histocompatibility antigen ACC-6.

## REFERENCES

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- Spierings, E., et al. 2004. Minor histocompatibility antigens—big in tumour therapy. Trends Immunol. 25: 56-60.
- 4. Gillard, A., et al. 2006. Modulation and redistribution of proteinase inhibitor 8 (Serpinb8) during kidney regeneration. Am. J. Nephrol. 26: 34-42.
- 5. Leblond, J., et al. 2006. The serpin proteinase inhibitor 8: an endogenous furin inhibitor released from human platelets. Thromb. Haemost. 95: 243-252.
- Buss, C., et al. 2007. Haploinsufficiency of the SERPINA6 gene is associated with severe muscle fatigue: A *de novo* mutation in corticosteroid-binding globulin deficiency. J. Neural. Transm. 114: 563-569.
- Seixas, S., et al. 2007. Sequence diversity at the proximal 14q32.1 SERPIN subcluster: evidence for natural selection favoring the pseudogenization of SERPINA2. Mol. Biol. Evol. 24: 587-598.
- Park, M.J., et al. 2010. Improved genotyping of the human minor histocompatibility antigen HB-1 by polymerase chain reaction with sequencespecific primers using a complementary oligonucleotide. Tissue Antigens 76: 482-486.

#### CHROMOSOMAL LOCATION

Genetic locus: HMSD (human) mapping to 18q22.1.

## SOURCE

HMSD (Y-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HMSD of human origin.

## **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-243035 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

HMSD (Y-18) is recommended for detection of HMSD of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of HMSD: 15 kDa.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.