# HMSD (T-18): sc-243036



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**

- Dolstra, H., et al. 1999. A human minor histocompatibility antigen specific for B cell acute lymphoblastic leukemia. J. Exp. Med. 189: 301-308.
- de Rijke, B., et al. 2003. Generation of autologous cytotoxic and helper T-cell responses against the B-cell leukemia-associated antigen HB-1: relevance for precursor B-ALL-specific immunotherapy. Blood 102: 2885-2891.
- 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.
- 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.
- 8. Park, M.J., et al. 2010. Improved genotyping of the human minor histocompatibility antigen HB-1 by polymerase chain reaction with sequence-specific primers using a complementary oligonucleotide. Tissue Antigens 76: 482-486.

# CHROMOSOMAL LOCATION

Genetic locus: HMSD (human) mapping to 18g22.1.

# **SOURCE**

HMSD (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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-243036 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

HMSD (T-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) Immunofluorescence: 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.

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