

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse THSD1 in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant human THSD1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse THSD1 Glu25-Asn412 Accession # Q9JM61
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 µg/mL	Recombinant Mouse THSD1 (Catalog # 4784-TH)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

Mouse THSD1 (Thrombospondin type-1 domain-containing protein 1), also known as Transmembrane molecule with thrombospondin module (Tmtsp), is a 95 kDa, type I transmembrane protein (1). It is synthesized as a precursor that is 851 amino acids (aa) in length, and has a 24 aa signal sequence, a 388 aa extracellular region, a 21 aa transmembrane region, and a 418 aa cytoplasmic region. The extracellular region contains six potential N-linked glycosylation sites and the thrombospondin type-1 (TSP1) domain, which is implicated in cell adhesion and migration (1). Also present in the molecule are 9 PKC-phosphorylation sites, 3 Ig-like domains, and a tyrosine-phosphorylation site by its C-terminus (1). Mouse THSD1 shares 78% aa sequence identity with human THSD1. THSD1 is highly expressed in hematopoietic stem cells (HSCs) and progenitor cells, including CD34^{low}Kit⁺Sca-1⁺Lin⁻ HSCs, CD34⁺Kit⁺Sca-1⁺Lin⁻ and Lin⁻ progenitor cells, and to a lesser degree in thymic CD4⁺CD8⁺ cells (1). Expression gradually decreases during T cell differentiation (1). In addition, THSD1 is widely expressed on endothelial cells, with highest expression in the lung (1). THSD1's ligand and function are unknown, but it is postulated that THSD1 may be involved in the regulation of vasculogenesis and/or angiogenesis through its interaction with its specific ligand (1). THSD1 may function in primitive hematopoietic cells in the bone marrow niche, and through its TSP1 and Ig-like domains, it may play a role in HSC homing to the niche following cell-to-cell contact to maintain hematopoietic stem cell quiescence (1).

References:

1. Takayanagi, S. *et al.* (2006) *Blood* **107**:4317.