Recombinant Human THSD7A

Catalog Number: 9524-TH

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Ala48-Trp1607, with a C-terminal 6-His tag Accession # Q9UPZ6
N-terminal Sequence Analysis	Ala48
Predicted Molecular Mass	176 kDa

SPECIFICATIONS

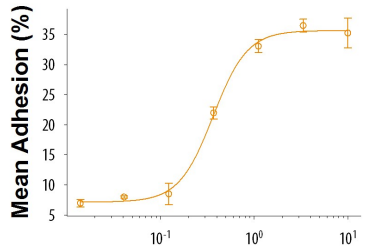
SDS-PAGE	160-265 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of SVEC4-10 mouse vascular endothelial cells. The ED_{50} for this effect is 0.1-0.6 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>85%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Immobilized Recombinant Human THSD7A (Catalog # 9524-TH) supports the adhesion of SVEC4-10 mouse vascular endothelial cells. The ED_{50} for this effect is 0.1-0.6 µg/mL.

BACKGROUND

Thrombospondin type I domain containing 7A, also known as THSD7A, is an approximately 250 kDa type I membrane protein (1). THSD-7A has a large extracellular domain containing ten thrombospondin type 1 repeats, six WSXW motifs, one RGD motif, and fourteen predicted N-glycosylated sites (1). Mature THSD7A shares 91% and 92% amino acid sequence identity with mouse and rat, respectively. THSD7A is expressed in podocytes, glomerular endothelial cells and mesangial cells (2). It is a novel neural protein known to affect endothelial migration and vascular patterning during development (1, 3). Soluble THSD7A promotes endothelial filopodia formation and focal adhesion assembly and induces FAK-dependent signaling during angiogenesis (1). THSD7A can co-localize with aVb3 integrin in HUVECs (3). Additionally, most recent study has indicated that THSD7A is associated with obesity (4).

References:

1. Kuo, M.W. *et al.* (2011) PLoS One **6**: e29000.
2. Tomas, N.M. *et al.* (2014) N. Engl. J. Med. **371**:2277.
3. Wang, C.H. *et al.* (2010) J. Cell Physiol. **222**: 685.
4. Nizamuddin, S. *et al.* (2015) Int. J. Obes. (Lond.) **39**:1662.

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