Recombinant Mouse ST7/LRP12

Catalog Number: 7910-S7

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived Glu33-Thr491, with a C-terminal 6-His tag Accession # Q8BUJ9
N-terminal Sequence Analysis	Glu33
Predicted Molecular Mass	52.4 kDa

SPECIFICATIONS

SDS-PAGE	65-80 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Mouse ST7/LRP12 is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Human LRPAP (Catalog # 4296-LR) that produces 50% of the optimal binding response is approximately 0.5-2.5 µg/mL.
Endotoxin Level	<0.01 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 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.

BACKGROUND

ST7 (Suppressor of Tumorigenicity 7), also known as RAY1, TSG7 and FAM4A1, is a type I transmembrane protein belonging to the LDLR (low density lipoprotein receptor) superfamily and is designated LRP12 (1-3). The mouse ST7 cDNA encodes 858 amino acids (aa) including a 32 aa signal sequence, a 460 aa extracellular domain (ECD) containing two CUB domains and five LDLR class A domains, a 21 aa transmembrane domain, and a 345 aa cytoplasmic domain containing motifs implicated in endocytosis and signal transduction (1, 2). Mouse ST7 shares 97% aa sequence homology rat, and 95% with human, bovine, equine and porcine ST7 within the ECD. A mouse ST7 splicing variant lacks aa 27-45, and another potential variant has an alternate start site at aa 188. ST7 is widely expressed in normal tissues, especially on fibroblasts (1, 4). Highest mRNA levels are detected in heart and skeletal muscle (1). ST7 was originally proposed to be a tumor suppressor protein, but it is not consistently down-regulated in a variety of cancers, either by mutation or loss of heterozygosity (1, 4-7). In certain cancers, expression may even be up-regulated (8). Expression may be associated with down-regulated expression of extracellular matrix molecules that are involved in remodeling, such as SPARC, IGFBP5 and several matrix metalloproteinases, and modulation of *in vivo* tumorigenicity (4, 5).

References:

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