KIM-1 Human HEK293

Product Data Sheet

Type: Recombinant
Source: HEK293
Species: Human
Other names: Hepatitis A Virus Cellular Receptor 1, HAVcr-1, Kidney injury molecule 1, KIM-1, T-cell immunoglobulin and mucin domain-containing protein 1, TIMD-1, T-cell immunoglobulin mucin receptor 1, TIM, TIM-1, T-cell membrane protein 1, HAVCR1

Cat. No.:
RD172150100 (0.1 mg)

Description

Total 283 AA. MW: 30.5 kDa (calculated). UniProtKB acc. No. Q96D42 (Ser21-Thr288). N-terminal linker (2 extra AA), C-terminal linker (2 extra AA) and C-terminal His-tag (6 extra AA). Protein identity confirmed by LC-MS/MS.

Introduction to the Molecule

KIM-1 is a type I trans-membrane structural glycoprotein located in the renal proximal tubule epithelial cells. These cells undergo regeneration after various forms of injury and shed KIM-1 antigen into the urine. Thus urinary KIM-1 is an early and specific biomarker for tubular kidney injury. KIM-1 has become widely recognized by many organizations and agencies, including FDA, as an excellent tool in pre-clinical studies to monitor acute kidney tubular toxicity, by identifying adverse reactive drugs and therapeutic agents in drug development. Kidney injury caused by therapeutic agents and drug induction is a common type of injury requiring appropriate monitoring and intervention. Current standards using blood urea nitrogen and creatinine are considered late indicators of kidney injury and are often non-specific. KIM-1 has been shown time and again to outperform traditional biomarkers of kidney injury in preclinical biomarker studies.The detection of KIM-1 can occur in as little as six hours post injection of an agent known to cause kidney injury.

Research topic

Renal disease

Amino Acid Sequence

ASSVKVGGEA GPSVTLPCHY SGAVTSMCWN RGSCSLFTCQ NGIVWTNGTH VTYRKDTRYK LLGDLSRRDV SLTIENTAVS
DSGVYCCRVE HRGWFNDMKI TVSLEIVPPK VTTTPIVTTV PTVTTVRTST TVPTTTTVPM TTVPTTTVPT TMSIPTTTTV
LTTMTVSTTT SVPTTTSIPT TTSVPVTTTV STFVPPMPLP RQNHEPVATS PSSPQPAETH PTTLQGAIRR EPTSSPLYSY
TTDGNDTVTE SSDGLWNNNQ TQLFLEHSLL TANTT**KLHHH HHH**

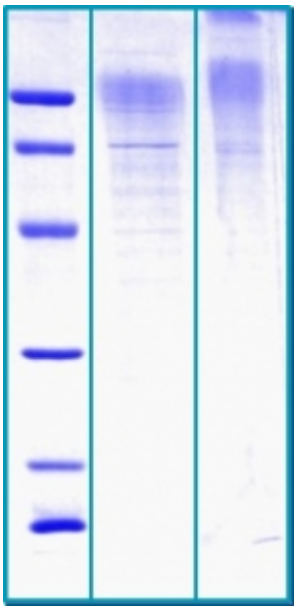
Source

HEK293

Purity

Purity as determined by densitometric image analysis: > 90 %

SDS-PAGE gel



12 % SDS-PAGE separation of Human KIM-1 (HEK):

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. Reduced and boiled sample, 2.5 µg/lane

3. Non-reduced and non-boiled sample, 2.5 µg/lane

Endotoxin

< 1.0 EU/µg

Formulation

Filtered (0.4 µm) and lyophilized from 0.5 mg/ml solution in phosphate buffered saline, 5 % w/v trehalose.

Reconstitution

Add 200 µl of deionized water to prepare a working stock solution of approximately 0.5 mg/ml and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping

At temperature 2-8 °C. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store the lyophilized protein at -80 °C. Lyophilized protein remains stable until the expiry date when stored at -80 °C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80 °C for long term storage. Reconstituted protein can be stored at 4 °C for a week.

Quality Control Test

BCA to determine quantity of the protein.
SDS-PAGE to determine purity of the protein.
LAL TEST to determine endotoxin level.

Applications

Cell culture and/or animal studies, ELISA, Western blotting

Note

This product is intended for research use only.

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