APA122Ra01 100μg
Active Stromal Cell Derived Factor 1 (SDF1)
Organism Species: *Rattus norvegicus* (Rat)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Gly21~Lys89
Tags: Two N-terminal Tags, His-tag and GST-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.6
Predicted Molecular Mass: 38.0kDa
Accurate Molecular Mass: 40kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

GKPVSLSYRC PCRFFESHVA RANVKHLKIL
NTPNCALQIV ARLKSNNRQV CIDPKLKWIQ EYLDKALNK

[ACTIVITY]

The stromal cell-derived factor 1 (SDF1), also known as C-X-C motif chemokine 12 (CXCL12), is a chemokine protein. SDF1 is strongly chemotactic for lymphocytes. During embryogenesis, it directs the migration of hematopoietic cells from fetal liver to bone marrow and the formation of large blood vessels. CXCL12 is also chemotactic for mesenchymal stem cells and is expressed in the area of inflammatory bone destruction, where it mediates their suppressive effect on osteoclastogenesis. Besides, Chemokine C-C-Motif Receptor 1 (CCR1) has been identified as an interactor of SDF1, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat SDF1 and recombinant rat CCR1. Briefly, SDF1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100μL were then transferred to CCR1-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-SDF1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of SDF1 and CCR1 was shown in Figure 1, and this effect was in a dose dependent manner.

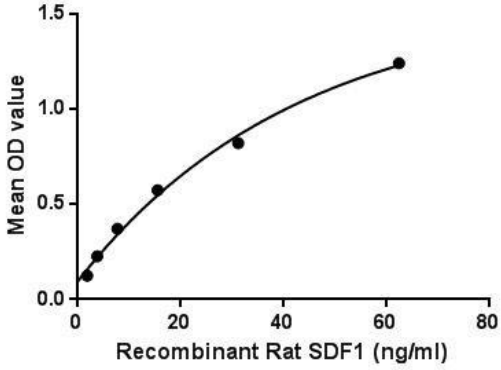

Figure 1. The binding activity of SDF1 with CCR1

[IDENTIFICATION]

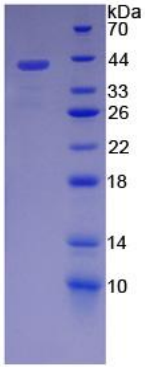

Figure 2. SDS-PAGE

Sample: Active recombinant SDF1, Rat

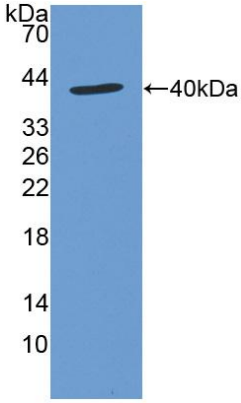

Figure 3. Western Blot

Sample: Recombinant SDF1, Rat;

Antibody: Rabbit Anti-Rat SDF1 Ab (PAA122Ra01)

[IMPORTANT NOTE]

The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.