APA939Mu02 50μg
Active Gamma-synuclein (SNCG)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Met1~Asp123
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 600μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 4.3
Predicted Molecular Mass: 16.7kDa
Accurate Molecular Mass: 19kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8ºC for one month.
Aliquot and store at -80ºC 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]

MDVFKKGFSIAKEGVVGAVEKTKQGVTEAAEKTKEGVMYVGTKTKENVVQSVTSVAEKTKE
QANAVSEAVVSSVNTVANKTVEEAENIVVTTGVVRKEDLEPPAQDQEAKEQEENEEAKSGE
D

[ACTIVITY]

Gamma-synuclein (SNCG), a 127-amino-acid protein belonging to the synuclein family, is predominantly expressed in the nervous system and epithelial tissues. It regulates cytoskeletal dynamics, cell proliferation, and neurotransmitter release under physiological conditions. Dysregulated SNCG expression is linked to neurodegenerative diseases and multiple cancers, where it promotes tumor invasion and metastasis by modulating signaling pathways. Emerging evidence indicates its role as an oncogenic driver, making it a potential therapeutic target. SNCG interacts with VEGFR1 to enhance vascular endothelial growth factor (VEGF)-mediated signaling, facilitating angiogenesis and tumor progression.To detect the activity of recombinant SNCG, a functional ELISA assay was performed to evaluate the interaction between recombinant human SNCG and recombinant human VEGFR1.Briefly, biotin-linked SNCG were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100μl were then transferred to VEGFR1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 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 SNCG and VEGFR1 was shown in Figure 1, the EC50 for this effect is 0.15147μg/mL.

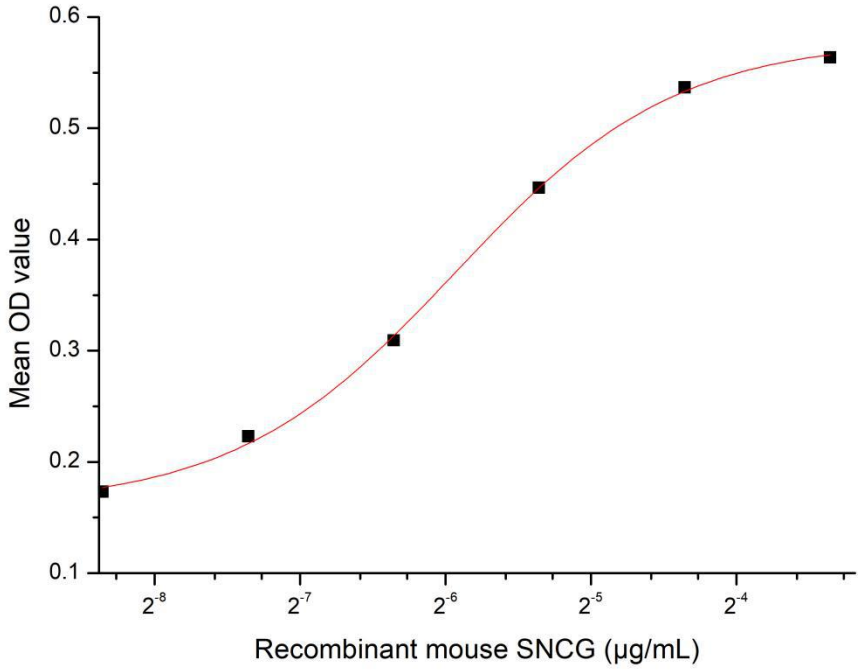

Figure 1. The binding activity of SNCG and VEGFR1

[IDENTIFICATION]

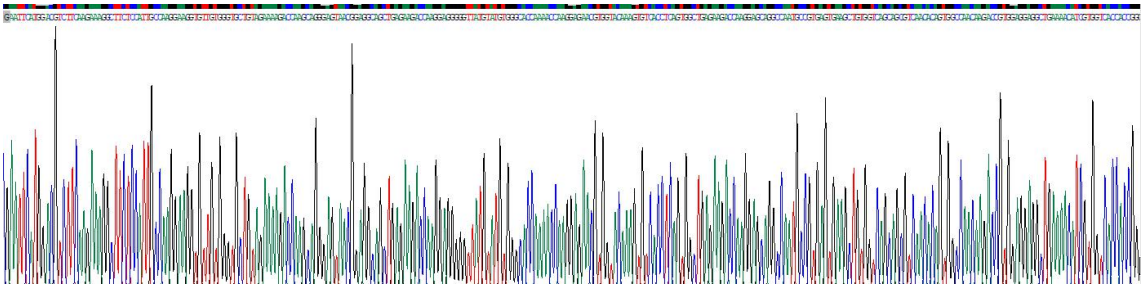

Figure 2. Gene Sequencing (extract)

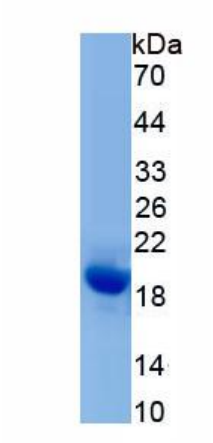

Figure 3. SDS-PAGE

Sample: Active recombinant SNCG, Mouse

[IMPORTANT NOTE]

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