APC551Hu01 100μg
Active Janus Kinase 1 (JAK1)
Organism Species: *Homo sapiens* (Human)
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: His596~Ile841
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% SKL, 5%Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.2
Predicted Molecular Mass: 31.9kDa
Accurate Molecular Mass: 32kDa 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]

HIYSG
TLMDYKDDEG TSEEKKIKVI LKVLDPSHRD ISLAFFEAAS MMRQVSHKHI
VYLYGVCVRD VENIMVEEFV EGGPLDLFMH RKSDVLTTPW KFKVAKQLAS
ALSYLEDKDL VHGNVCTKNL LLAREGIDSE CGPFIKLSDP GIPITVLSRQ
ECIERIPWIA PECVEDSKNL SVAADKWSFG TTLWEICYNG EIPLKDKTLI
EKERFYESRC RPVTPSCKEL ADLMTRCMNY DPNQRPFFRA I

[ACTIVITY]

Janus Kinase 1, also known as JAK1, is a member of the Janus kinase family, which plays a crucial role in various cellular processes, including signal transduction, immune response, and hematopoiesis. It is reported that the binding of JAK1 to IFNa2 plays an important role in immune response and antiviral defense. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human JAK1 and recombinant mouse IFNa2. Briefly, JAK1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to IFNa2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-JAK1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human JAK1 and recombinant mouse IFNa2 was shown in Figure 1, the EC50 for this effect is 0.1 ug/mL.

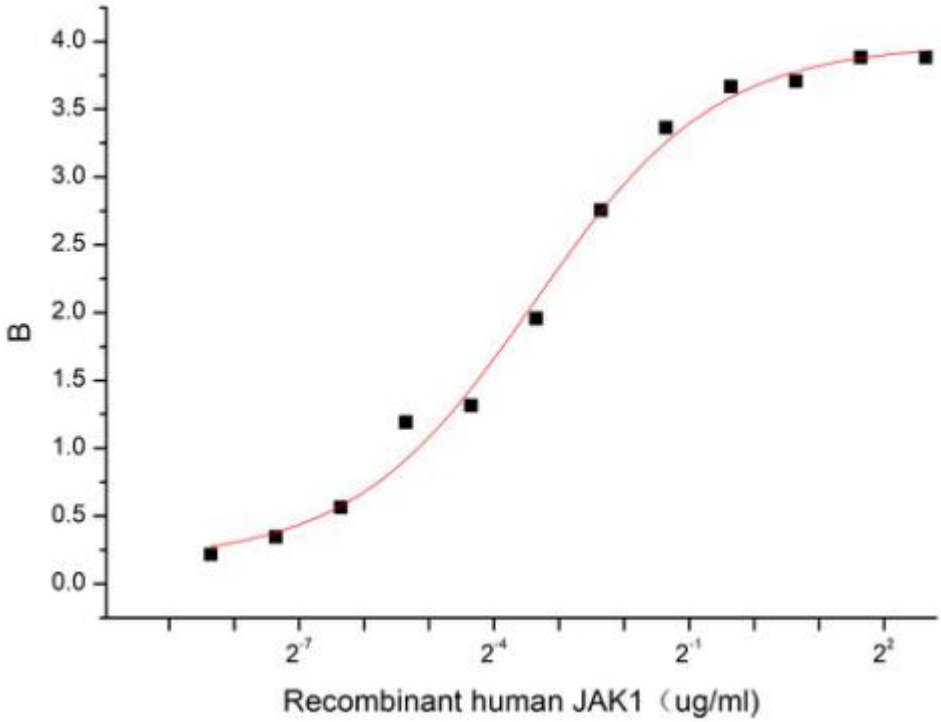

Figure 1. The binding activity of recombinant human JAK1 and recombinant mouse IFNa2

[IDENTIFICATION]

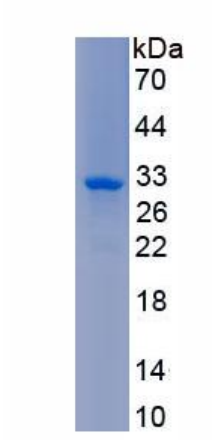

Figure 2. SDS-PAGE

Sample: Active recombinant JAK1, Human

[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.