

APF494Hu01 100µg

Active Janus Kinase 2 (JAK2)

Organism Species: Homo sapiens (Human)

Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Asn508~Ala800

Tags: N-terminal His-tag

Purity: >92%

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays; In vivo assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 6.7

Predicted Molecular Mass: 34.9kDa

Accurate Molecular Mass: 35kDa 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 37°C 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]

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NLL VFRTNGVSDV PTSPTLQRPT HMNQMVFHKI RNEDLIFNES
LGQGTFTKIF KGVRRVVDY GQLHETEVLV KVLDKAHRNY SESFFEAASM
MSKLSHKHLV LNYGVCVCGD ENILVQEFVK FGSLDTYLKK NKNCINILWK
LEVAKQLAWA MHFLEENTLI HGNVCAKNIL LIREEDRKTG NPPFIKLSDP
GISITVLPKD ILQERIPWVP PECIENPKNL NLATDKWSFG TTLWEICSGG
DKPLSALDSQ RKLQFYEDRH QLPAPKWAEL ANLINNCMDY EPDFRPSFRA
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[ACTIVITY]

JAK2 (Tyrosine-protein kinase JAK2) is a tyrosine kinase involved in various processes such as cell growth, development, differentiation or histone modifications. JAK2 is considered to associate with some type I receptors, including EPOR (Erythropoietin receptor), therefore participates in cellular signal transduction. Thus a binding ELISA assay was conducted to detect the interaction of recombinant human JAK2 and recombinant human EPOR. Briefly, JAK2 were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL JAK2 were then transferred to EPOR-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-JAK2 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°C. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of JAK2 and EPOR was shown in Figure 1, and this effect was in a dose dependent manner.

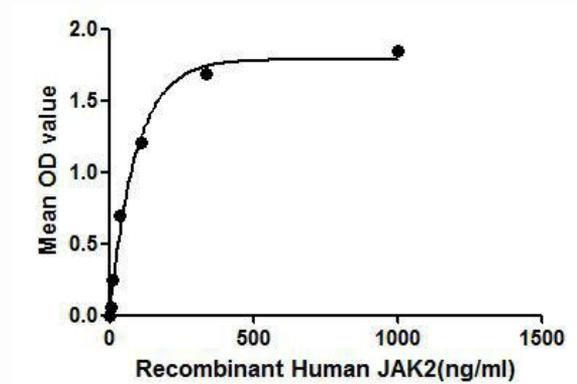


Figure 1. The binding activity of JAK2 with EPOR.

[IDENTIFICATION]

JACCCTCGGTCTGGAAGCAATGGTGTTCCTGATGTCGCACTCCCAAGCTTAGAGAGGCTCTCTATATGAAACAACGGTGTTCACAAAATGGAATGAGATTTCATATTAATGAAAGCTTTCGCGCAGGCCTTTTCGAAGATTTTAAAGGCTCAGAGAGTGGAGACTACGGTCACTGCATGAAG
 HLLVFRTHGVSDVPTSPFTLQRPTTBHHTQTVFBKIRHEDLIFHESLGGQQTFTKIFKGVRRREVGDYGLBET

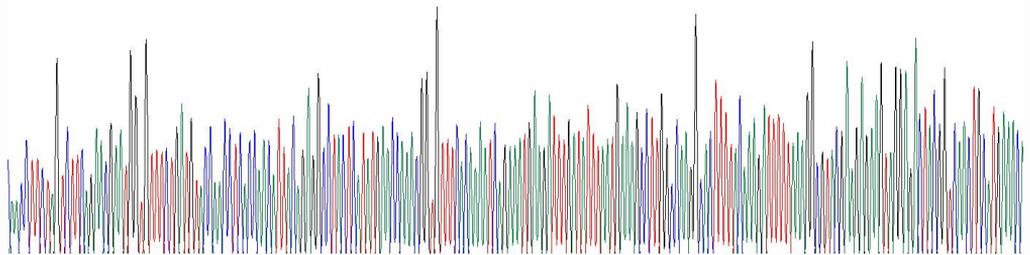


Figure 2. Gene Sequencing (extract)

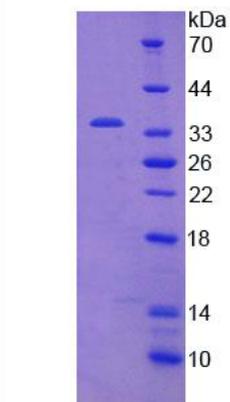


Figure 3. SDS-PAGE

Sample: Active recombinant JAK2, Human

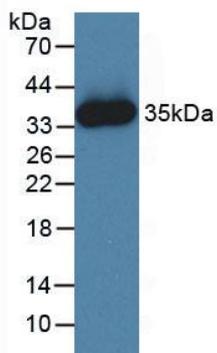


Figure 4. Western Blot

Sample: Recombinant JAK2, Human;

Antibody: Rabbit Anti-Human JAK2 Ab (PAF494Hu01)