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ProductInformation

Anti- JAB1
Developed In Rabbit, Affinity Isolated Antibody

Product Number **J 3020**

Product Description

Anti- JAB1 is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 4-20 of human JAB1 with C-terminal added cysteine, conjugated to KLH. The corresponding sequence is identical in mouse and rat. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti- JAB1 recognizes human, mouse and rat JAB1. Applications include immunoblotting (38 kDa), immunoprecipitation and immunohistology. Additional bands may be detected when immunoblotting some extract preparations. Detection of the JAB1 band by immunoblotting is specifically inhibited with the immunizing peptide.

Jun activation domain-binding protein-1 (JAB1) also designated COP9 subunit 5 (COPS5) or SGN5 is a coactivator of AP-1 transcription factor that also promotes degradation of the cyclin-dependent kinase inhibitor $p27^{Kip1}$.[1,2] JAB1 interacts with c-Jun AP-1 containing complexes, and enhances transactivation from AP-1- dependent promoters. It also interacts with Jun D but not with Jun B or v-Jun. JAB1 is highly conserved in evolution and is widely expressed in mammalian tissues.[3] It is localized both the nucleus and the cytoplasm. It interacts with the cytoplasmic domain of the αL/β2 integrin LFA-1. Following LFA1 engagement the nuclear pool of JAB1 increases and activation of an AP-1-driven promoter is enhanced.[4] Interaction of JAB1 with the nuclear progesterone receptor and the steroid receptor activator (SRC-1) was reported.[5]

JAB1 is a stability and activity regulator of Hypoxia - inducible factor-1 (HIF-1), a transcription factor that controls activation of several genes responsive to the cellular oxygen tension.[6] The macrophage migration inhibitory factor (MIF) associates with JAB1 in the cytosol near the plasma membrane. Endogenous MIF inhibits JAB1-induced AP1 transcriptional activity.[7] JAB1 is a subunit of the COP9 regulatory complex. COP9 cleaves the ubiquitin-like protein Nedd8 from the Cul1 subunit of SCF ubiquitin ligases. A metalloprotease motif in JAB1 plays a role in this isopeptidase activity. Breakdown of the cyclin-dependent kinase inhibitor $p27^{Kip1}$ is promoted by JAB1.[8] The latter expression in several cancers inversely correlates with $p27^{Kip1}$ and may reflect tumor aggressiveness.[9-10] A possible involvement of JAB1 in atherosclerosis was also reported.[11] Involvement of JAB1 in degradation of the suppressors p53 and smad4 was described recently.[12,13]

Reagent

The product is provided as a solution in 0.01 M phosphate buffered saline pH 7.4 containing 1% BSA and 15 mM sodium azide as preservative.

Antibody Concentration: 0.5 – 1.0 mg/ml

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

A working concentration between 0.25-0.5 µg/ml is determined by immunoblotting, using whole extracts of mouse NIH-3T3 cells.

4.0-6.0 µg of the antibody immunoprecipitates JAB1 from 0.5 mg of RIPA extract of rat PC12 cells.

A working concentration between 10-20 µg/ml is determined by indirect immunoperoxidase staining of formalin-fixed, paraffin-embedded sections of human breast carcinoma.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

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