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Product Information

Anti-JAB1 (SV-16)
produced in rabbit, IgG fraction of antiserum

Catalog Number **J3395**

Product Description

Anti-JAB1 (SV-16) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 201-216 of human JAB1, conjugated to KLH. The corresponding sequence is identical in mouse and rat. Whole antiserum is purified to provide an IgG fraction of antiserum

Anti-JAB1 (SV-16) recognizes human, mouse, and rat JAB1. Applications include immunoblotting (38 kDa), immunoprecipitation, and immunohistology. Additional bands may be detected when immunoblotting with 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 to the nucleus and the cytoplasm. JAB1 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) has been 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 signalosome 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 has been reported.[11] Also, involvement of JAB1 in degradation of the suppressors p53 and smad4 has been described.[12, 13]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at –20 °C. For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a minimum working antibody dilution of 1:500 is recommended using a whole extract of human A431 cells and mouse NIH-3T3 cells, and a chemiluminescent detection reagent.

Immunoprecipitiation: 20-40 μg of the antibody immunoprecipitates JAB1 from 0.45 mg of RIPA extracts of rat PC12 cells.

Indirect immunoperoxidase staining: a minimum working antibody dilution of 1:100 is recommended using formalin-fixed, paraffin-embedded sections of human breast carcinoma.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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MG,KAA,ST,PHC 08/10-1