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ProductInformation

Anti-Csk
Developed in Rabbit, IgG Fraction of Antiserum

Product Number **C 7863**

Product Description

Anti-Csk is developed in rabbit using a synthetic peptide corresponding to amino acids 433-450 at the C-terminus of rat Csk, conjugated to KLH as immunogen. This sequence is highly conserved in human and mouse. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins. Anti-Csk recognizes Csk (50 kDa). Applications include immunoblotting and immunohistochemistry. Staining of Csk in immunoblotting is specifically inhibited with the Csk immunizing peptide (rat, amino acids 433-450).

C-terminal Src kinase (Csk, Csk, p50Csk), is a ubiquitously expressed 50 kDa cytoplasmic tyrosine kinase. Csk phosphorylates Src at Tyr^{527}, down-regulating Src kinase activity.[1-3] Csk also phosphorylates *in vitro* other members of the Src family of protein tyrosine kinases (PTKs), such as Lck, c-Fgr, Fyn and Lyn, at their conserved C-terminal tyrosine residue and consequently down regulates their activities.[2,4] Csk structure resembles that of Src and includes an SH3, SH2 and a catalytic domain.[1,2] However, Csk lacks the catalytic domain autophosphorylation site, the C-terminal regulatory tyrosine and the N-terminal myristoylation signal of Src. Csk has been shown to regulate Src tyrosine kinase activity *in vivo* as well. Relocation of Csk from the cytoplasm to the plasma membrane allows the molecule to phosphorylate $SrcTyr^{527}$. When co-expressed with an activated c-Src mutant, a small fraction of Csk relocates to podosome-like structures containing activated c-Src.[5,6]

Csk is involved in the regulation of integrin control of cell attachment and shape.[7] Csk interacts with the focal adhesion proteins FAK and paxillin, making them candidates for Csk redistribution to podosomes.[7,8] Over expression of Csk blocks transformation by co-expression of c-Src and v-Crk.[9] Over expressed Csk is localized in focal adhesions and is expressed at high levels in lymphoid tissues and in developing embryonic brain., It rapidly decreases to low levels as the brain matures. Csk gene knockout leads to neural tube defects and embryonic lethality in mice. This growth retardation and necrosis in the neuronal tissue indicates that Csk is essential for mouse embryo development.[10,11] In embryonic tissues or in cells derived from these embryos, Src, Fyn and Lyn kinase activities are greatly enhanced. In Csk-deficient mouse embryonic fibroblasts, actin stress fiber formation via G-protein signaling is completely abolished, suggesting that Csk may also play a critical role in linking G-protein signals to actin cytoskeletal reorganization.[12]

Reagent

Anti-Csk is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

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 hazards and safe handling practices.

Storage/Stability
For continuous use, store at –20 °C. Upon initial thawing freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Storage in "frost-free" freezers is also 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 minimum working dilution of 1:2,000 is determined by immunoblotting, using a whole cell extract of human Jurkat cell line and a cytosolic fraction of embryonic rat brain.

A minimum working dilution of 1:200 is determined by immunohistochemistry of formalin-fixed and paraffin-embedded section of rat spleen.

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

References

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