

Fyn (145-247): sc-4042

BACKGROUND

Src is the human homolog of the v-src gene of the Rous sarcoma virus, also called avian sarcoma virus or ASV. Src was the first proto-oncogenic non-receptor tyrosine kinase characterized in human. By virtue of common structural motifs, the Src family is composed of nine members in vertebrates, including Src, Yes, Fgr, Frk, Fyn, Lyn, Hck, Lck and Blk. Src-family kinases transduce signals that are involved in the control of a variety of cellular processes, including proliferation, differentiation, motility, and adhesion. Src-family kinases contain an amino terminal cell membrane anchor followed by an SH3 domain and an SH2 domain involved in modular association and activation, respectively. Src-family kinases are normally maintained in an inactive state and can be activated transiently during cellular events such as mitosis. Different subcellular localizations of Src-family kinases may be important for the regulation of specific cellular processes such as mitogenesis, cytoskeletal organization, and membrane trafficking. Fyn and Lck kinases play a key role in T-cell antigen receptor (TCR) signaling. The human Fyn gene maps to chromosome 6q21 and encodes a 537 amino acid protein.

REFERENCES

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7. Gilmore, E.S., et al. 2001. SRC family kinases mediate epithelial Na⁺ channel inhibition by endothelin. *J. Biol. Chem.* 276: 42610-42617.
8. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 137025. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: FYN (human) mapping to 6q21; Fyn (mouse) mapping to 10 B1.

SOURCE

Fyn (145-247) is expressed in *E. coli* as a 41 kDa tagged fusion protein corresponding to amino acids 145-247 of Fyn of mouse origin containing the SH2 domain.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Fyn (145-247) is purified from bacterial lysates (>98%) by glutathione agarose chromatography and supplied as 50 µg purified protein in PBS containing 5 mM DTT and 50% glycerol.

Also available in agarose conjugate format; 100 µg purified Fyn (145-247) protein conjugated to 0.1 ml agarose in PBS containing 0.1% azide, 0.1% BSA and 10% agarose: Fyn (145-247) AC: 4042 AC.

APPLICATIONS

Fyn (145-247) in its soluble, non-conjugated form (sc-4042) is recommended for purification of target proteins containing appropriate phosphotyrosine binding sites when used in combination with glutathione agarose (sc-2009)

Alternatively, the agarose conjugated form of this product (sc-4042 AC) can be used directly for target protein binding.

Molecular Weight of Fyn: 59 kDa.

SELECT PRODUCT CITATIONS

1. Sadoshima, J. and Izumo, S. 1996. The heterotrimeric G_q protein-coupled angiotensin II receptor activates p21 ras via the tyrosine kinase-Shc-Grb2-Sos pathway in cardiac myocytes. *EMBO J.* 15: 775-787.
2. Weyrich, A.S., et al. 1998. Signal-dependent translation of a regulatory protein, Bcl-3, in activated human platelets. *Proc. Natl. Acad. Sci. USA* 95: 5556-5561.
3. Sobko, A., et al. 1998. Constitutive activation of delayed-rectifier potassium channels by a src family tyrosine kinase in Schwann cells. *EMBO J.* 17: 4723-34.
4. Kukharsky, V., et al. 2004. Complexes of γ-tubulin with nonreceptor protein tyrosine kinases Src and Fyn in differentiating P19 embryonal carcinoma cells. *Exp. Cell Res.* 298: 218-228.

STORAGE

Store Fyn (145-247): sc-4042 at -20° C and Fyn (145-247) AC: sc-4042 AC at 4° C; stable for one year from the date of shipment.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.