



## Intersectin<sub>L</sub> (C-20): sc-9950

### BACKGROUND

Intersectin, which is also designated Ese1 or ITSN1, is a component of the cellular endocytic machinery. Intersectin is composed of two N-terminal Ese15 homology (EH) domains, a central highly charged region and five C-terminal SH3 domains, which all largely contribute to the association of Intersectin with other components of the endocytic pathway. The EH domain is particularly responsible for the directed localization of Intersectin to Clathrin-coated pits near the plasma membrane. Within the endocytic vesicles the SH3 domains facilitate the binding of Intersectin with Dynamin, and the central domain is essential for the association of Intersectin with SNAP 25. Two isoforms of Intersectin are produced as a result of alternative splicing in a stop codon, and they are designated as Intersectin-short and long (or Intersectin<sub>S</sub> and Intersectin<sub>L</sub>) to reflect an extended C-terminal domain. The long form, which has an extended C-terminal domain, is specifically expressed in neurons; the short form is detected in both glial and nonneuronal cells. The related proteins Intersectin-2 and the murine homolog Ese2 also contain the characteristic N-terminal EH domains, the central coiled-coil domain and five C-terminal SH3 domains and are likely involved in the endocytic scaffolding complexes.

### REFERENCES

1. Guipponi, M., Scott, H.S., Chen, H., Schebesta, A., Rossier, C. and Antonarakis, S.E. 1998. Two isoforms of a human Intersectin (ITSN) protein are produced by brain-specific alternative splicing in a stop codon. *Genomics* 53: 369-376.
2. Yamabhai, M., Hoffman, N.G., Hardison, N.L., McPherson, P.S., Castagnoli, L., Cesareni, G. and Kay, B.K. 1998. Intersectin, a novel adaptor protein with two Eps15 homology and five Src homology 3 domains. *J. Biol. Chem.* 273: 31401-31407.
3. Hussain, N.K., Yamabhai, M., Ramjaun, A.R., Guy, A.M., Baranes, D., O'Bryan, J.P., Der, C.J., Kay, B.K. and McPherson, P.S. 1999. Splice variants of Intersectin are components of the endocytic machinery in neurons and nonneuronal cells. *J. Biol. Chem.* 274: 15671-15677.
4. Okamoto, M., Schoch, S. and Sudhof, T.C. 1999. ESH1/Intersectin, a protein that contains EH and SH3 domains and binds to Dynamin and SNAP 25. A protein connection between exocytosis and endocytosis? *J. Biol. Chem.* 274: 18446-18454.
5. Simpson, F., Hussain, N.K., Qualmann, B., Kelly, R.B., Kay, B.K., McPherson, P.S. and Schmid, S.L. 1999. SH3-domain-containing proteins function at distinct steps in Clathrin-coated vesicle formation. *Nat. Cell Biol.* 1: 119-124.
6. Sengar, A.S., Wang, W., Bishay, J., Cohen, S. and Egan, S.E. 1999. The EH and SH3 domain Ese proteins regulate endocytosis by linking to Dynamin and Eps15. *EMBO J.* 18: 1159-1171.
7. Tong, X.K., Hussain, N.K., de Heuvel, E., Kurakin, A., Abi-Jaoude, E., Quinn, C.C., Olson, M.F., Marais, R., Baranes, D., Kay, B.K. and McPherson, P.S. 2000. The endocytic protein Intersectin is a major binding partner for the Ras exchange factor mSos1 in rat brain. *EMBO J.* 19: 1263-1271.

### CHROMOSOMAL LOCATION

Genetic locus: ITSN1 (human) mapping to 21q22.11.

### SOURCE

Intersectin<sub>L</sub> (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Intersectin<sub>L</sub> of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9950 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Intersectin<sub>L</sub> (C-20) is recommended for detection of Intersectin<sub>L</sub> of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Intersectin<sub>L</sub> (C-20) is also recommended for detection of Intersectin<sub>L</sub> in additional species, including equine, canine, bovine, porcine and avian.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.