



## ALS (N-14): sc-46758

### BACKGROUND

The insulin-like growth factor binding proteins, IGFbps, are a family of seven proteins that have co-evolved with the IGFs. IGFbps serve as shuttle molecules for both IGF-I and IGF-II and confer a level of regulation to the IGF signaling system by influencing the bio-availability, concentration and distribution of IGFs in the extracellular environment. In human circulation, the IGF-binding protein complex requires ALS (IGFBP acid-labile subunit), an extracellular protein involved in receptor-ligand binding and cell adhesion. ALS, detected primarily in plasma, is involved in protein-protein interactions that result in the formation of protein complexes.

### REFERENCES

1. Baxter, R.C., Martin, J.L. and Beniac, V.A. 1989. High molecular weight insulin-like growth factor binding protein complex. Purification and properties of the acid-labile subunit from human serum. *J. Biol. Chem.* 264: 11843-11848.
2. Leong, S.R., Baxter, R.C., Camerato, T., Dai, J. and Wood, W.I. 1992. Structure and functional expression of the acid-labile subunit of the insulin-like growth factor-binding protein complex. *Mol. Endocrinol.* 6: 870-876.
3. Fischer, F., Schulte, H., Mohan, S., Tataru, M.C., Kohler, E., Assmann, G. and von Eckardstein, A. 2004. Associations of insulin-like growth factors, insulin-like growth factor binding proteins and acid-labile subunit with coronary heart disease. *Clin. Endocrinol.* 61: 595-602.
4. de Boer, L., Hoogerbrugge, C.M., van Doorn, J., van Buul-Offers, S.C., Karperien, M. and Wit, J.M. 2004. Plasma insulin-like growth factors (IGFs), IGF-binding proteins (IGFBPs), acid-labile subunit (ALS) and IGFBP-3 proteolysis in individuals with clinical characteristics of Sotos syndrome. *J. Pediatr. Endocrinol. Metab.* 17: 615-627.
5. Payet, L.D., Firth, S.M. and Baxter, R.C. 2004. The role of the acid-labile subunit in regulating insulin-like growth factor transport across human umbilical vein endothelial cell monolayers. *J. Clin. Endocrinol. Metab.* 89: 2382-2389.
6. Lee, D.H., Chun, C., Kim, S.H., Lee, C.Y. 2005. Expression of porcine acid-labile subunit (pALS) of the 150 kDa ternary insulin-like growth factor complex and initial characterization of recombinant pALS protein. *J. Biochem. Mol. Biol.* 38: 225-231.
7. Liu, T., Qian, W.J., Gritsenko, M.A., Camp, D.G., 2nd, Monroe, M.E., Moore, R.J. and Smith, R.D. 2005. Human plasma N-glycoproteome analysis by immunoaffinity subtraction, hydrazide chemistry, and mass spectrometry. *J. Proteome. Res.* 4: 2070-2080.

### CHROMOSOMAL LOCATION

Genetic locus: IGFALS (human) mapping to 9p24.1-q22.33; Igfals (mouse) mapping to 17 A2-A3.

### SOURCE

ALS (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ALS 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-46758 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

ALS (N-14) is recommended for detection of ALS of mouse, rat and 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).

Suitable for use as control antibody for ALS siRNA (h): sc-60154 and ALS siRNA (m): sc-60155.

Molecular Weight of ALS: 66 kDa.

### 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.