

# Esophagin (C-12): sc-55936

## BACKGROUND

Esophagin, also known as small proline rich protein 3 (SPR3) or cornifin  $\beta$ , belongs to the cornifin family of cornified-envelope structural proteins. It is expressed in mucosal epithelia such as esophagus and tongue and is strongly induced during epidermal keratinocyte differentiation. Due to its highly inducible nature, Esophagin is considered a marker of squamous differentiation. Esophagin serves as a cross-linking protein within the cornified cell envelope and may play a role in the maintenance of normal esophageal epithelial homeostasis. It shares significant homology with the related proteins, SPRR1 and SPRR2. Esophagin is typically not expressed in healthy human epithelium, but its expression is upregulated in numerous hyperproliferative disorders of the skin. In contrast, its expression is dramatically downregulated in esophageal squamous cell carcinoma.

## REFERENCES

- Steinert, P.M., et al. 2000. Transglutaminase crosslinking and structural studies of the human small proline rich 3 protein. *Cell Death Differ.* 6: 916-930.
- Smolinski, K.N., et al. 2002. Activation of the Esophagin promoter during esophageal epithelial cell differentiation. *Genomics* 79: 875-880.
- Katou, F., et al. 2003. Differential expression of cornified cell envelope precursors in normal skin, intraorally transplanted skin and normal oral mucosa. *Br. J. Dermatol.* 148: 898-905.
- Kimos, M.C., et al. 2004. Esophagin and proliferating cell nuclear antigen (PCNA) are biomarkers of human esophageal neoplastic progression. *Int. J. Cancer* 111: 415-417.
- Lehr, E., et al. 2004. Infection with human papillomavirus alters expression of the small proline rich proteins 2 and 3. *J. Med. Virol.* 72: 478-483.
- Vitorino, R., et al. 2006. Two-dimensional electrophoresis study of *in vitro* pellicle formation and dental caries susceptibility. *Eur. J. Oral Sci.* 114: 147-153.

## CHROMOSOMAL LOCATION

Genetic locus: SPRR3 (human) mapping to 1q21.3.

## SOURCE

Esophagin (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Esophagin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-55936 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Esophagin (C-12) is recommended for detection of Esophagin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 Esophagin siRNA (h): sc-62282, Esophagin shRNA Plasmid (h): sc-62282-SH and Esophagin shRNA (h) Lentiviral Particles: sc-62282-V.

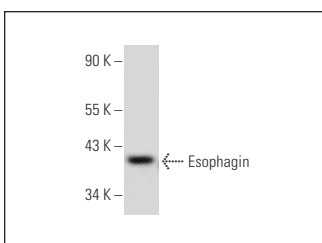
Molecular Weight of Esophagin: 37 kDa.

Positive Controls: Hep G2 cell lysate: sc-222.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Esophagin (C-12): sc-55936. Western blot analysis of Esophagin expression in Hep G2 whole cell lysate.

## 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.

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Try **Esophagin (E-6): sc-514844** or **Esophagin (BB.71): sc-100924**, our highly recommended monoclonal alternatives to Esophagin (C-12).