# Esophagin (BB.71): sc-100924



The Power to Question

## **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.
- 2. 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.
- 7. Cai, K., et al. 2006. Decreased polyphenol transport across cultured intestinal cells by a salivary proline-rich protein. Biochem. Pharmacol. 71: 1570-1580.
- Stewart, M.G. and Banks, D. 2006. Enhancement of long-term memory retention by Colostrinin in one-day-old chicks trained on a weak passive avoidance learning paradigm. Neurobiol. Learn. Mem. 86: 66-71.
- Zhang, Y., et al. 2007. Exogenous expression of Esophagin/SPRR3 attenuates the tumorigenicity of esophageal squamous cell carcinoma cells via promoting apoptosis. Int. J. Cancer 122: 260-266.

# **CHROMOSOMAL LOCATION**

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

#### **SOURCE**

Esophagin (BB.71) is a mouse monoclonal antibody raised against recombinant Esophagin of human origin.

#### **PRODUCT**

Each vial contains 100  $\mu g$   $lgG_3$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## **APPLICATIONS**

Esophagin (BB.71) is recommended for detection of Esophagin of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

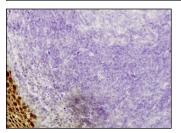
Suitable for use as control antibody for Esophagin siRNA (h): sc-62282, Esophagin shRNA Plasmid (h): sc-62282-SH and Esophagin shRNA (h) Lentiviral Particles: sc-62282-V.

Molecular Weight of Esophagin: 37/36 kDa.

#### **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-lgG $\kappa$  BP-FITC: sc-516140 or m-lgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

#### **DATA**



Esophagin (BB.71): sc-100924. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing nuclear and cytoplasmic localization.

# 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 for detailed protocols and support products.

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