

# Otolin-1 (Q-15): sc-243693

## BACKGROUND

Otolin-1 (OTOL1) is a 477 amino acid secreted protein that belongs to the OTOL1 family. Otolin-1 contains three collagen-like domains, one C1q domain and interacts with Otoconin 90. The gene that encodes Otolin-1 consists of more than 7,000 bases and maps to human chromosome 3q26.1. As one of the largest human chromosomes, human chromosome 3 has the lowest rate of segmental duplication in the genome. It also contains a chemokine receptor gene group as well as a number of loci involved in multiple human cancers. 8.8 genes per Mb is the average gene density for chromosome 3, making it one of the more gene-poor chromosomes. Although the average gene density is low, the genes that make up chromosome 3 are larger than average and make up about 49% of the chromosome. A 13.6-cM region on 3p21.31-21.2, where a tumor suppressor gene cluster is located, is believed to be a novel locus for nasopharyngeal carcinoma.

## REFERENCES

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3. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
4. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
5. Pfeifer, G.P., et al. 2005. Methylation of the tumor suppressor gene RASSF1A in human tumors. *Biochemistry* 70: 576-583.
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8. Nair, P.N., et al. 2007. High-resolution analysis of 3p deletion in neuroblastoma and differential methylation of the SEMA3B tumor suppressor gene. *Cancer Genet. Cytogenet.* 174: 100-110.
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## CHROMOSOMAL LOCATION

Genetic locus: OTOL1 (human) mapping to 3q26.1; Otol1 (mouse) mapping to 3 E2.

## SOURCE

Otolin-1 (Q-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Otolin-1 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-243693 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Otolin-1 (Q-15) is recommended for detection of Otolin-1 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).

Otolin-1 (Q-15) is also recommended for detection of Otolin-1 in additional species, including bovine and porcine.

Suitable for use as control antibody for Otolin-1 siRNA (m): sc-151343, Otolin-1 shRNA Plasmid (m): sc-151343-SH and Otolin-1 shRNA (m) Lentiviral Particles: sc-151343-V.

Molecular Weight of Otolin-1: 49 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.