

DESCRIPTION

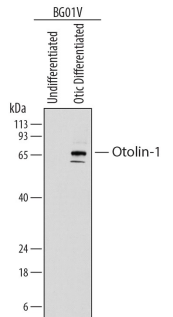
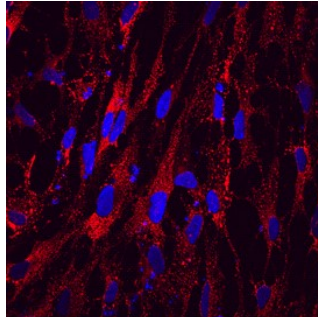
Species Reactivity	Human
Specificity	Detects human Otolin-1 in ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 839418
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Otolin-1 Lys24-Pro477 Accession # A6NHN0
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.25 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human Otolin-1 by Western Blot. Western blot shows lysates of BG01V human embryonic stem cells undifferentiated or differentiated to early otic lineage. PVDF membrane was probed with 0.25 µg/mL of Mouse Anti-Human Otolin-1 Monoclonal Antibody (Catalog # MAB8045) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for Otolin-1 at approximately 60-70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunocytochemistry</p>  <p>Otolin-1 in differentiated BG01V Human Embryonic Stem Cells. Otolin-1 was detected in immersion fixed BG01V human embryonic stem cells differentiated to early otic lineage using Mouse Anti-Human Otolin-1 Monoclonal Antibody (Catalog # MAB8045) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Otolin (OTOL1), also known as C1qTNF15, is an approximately 65 kDa protein found in the otoconial membrane lining the cochlea and vestibular labyrinth of the inner ear. It is secreted by supporting cells of the sensory epithelium. The otoconial membrane contains particles known as otoconia which are composed of glycoproteins and proteoglycans coated with calcium carbonate crystals. Otolin is one of the protein components of otoconia particles, and it is important for otoconia formation as well as for auditory and vestibular function. It associates into multimers and disulfide-linked oligomers and also associates with other otoconial proteins including Cerebellin-1 and Otoconin-90. Otolin contains three collagen-like regions followed by a C1q-like domain at the C-terminus. It is extensively glycosylated and has multiple hydroxylated proline residues in the collagenous regions. Human Otolin shares 72% aa sequence identity with mouse and rat Otolin.