

Olfm4 Antibody (Mouse Specific)

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: M	Sensitivity: Endogenous	MW (kDa): 85-90, 70	Source/Isotype: Rabbit	UniProt ID: #Q3UZZ4	Entrez-Gene Id: 380924
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Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Olfm4 Antibody (Mouse Specific) recognizes endogenous levels of total mouse Olfm4 protein. This antibody does not cross-react with human OLFM4.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala85 of mouse Olfm4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Olfactomedin-4 (OLFM4, hGC-1) is a member of the Olfactomedin family, a small group of extracellular proteins defined by the presence of a conserved "Olfactomedin domain" that is thought to facilitate protein-protein interactions (1). OLFM4 is a secreted glycoprotein, which forms disulfide bond-mediated oligomers, and is thought to mediate cell adhesion through its interactions with extracellular matrix proteins such as lectins (2). Human *OLFM4* was first cloned from myeloid cells (3) and is expressed in a distinct subset of neutrophils, though the functional significance of this differential expression pattern remains unclear (4). Among normal tissues, the expression of OLFM4 protein is most abundant in intestinal crypts (5), where it has garnered attention as a possible marker of intestinal stem cells (6). Notably, OLFM4 expression is markedly increased in several tumor types, including colorectal, gastric, pancreas, lung, and breast (reviewed in [1]). Furthermore, research studies show that the expression levels of OLFM4 vary in relation to the severity and/or differentiation status of multiple tumor types (1, 6-8), leading to the suggestion that OLFM4 may have utility as a prognostic marker in some cancer patients (9).

Genetic analyses of murine LGR5 stem cells identified Olfm4 as a robust intestinal stem cell marker, but unlike its human homolog, mouse Olfm4 expression is not detected in colonic epithelial crypts (10).

Background References

1. Yu, L. et al. (2011) *Neoplasia* 58, 9-13.
2. Liu, W. et al. (2006) *Exp Cell Res* 312, 1785-97.
3. Zhang, J. et al. (2002) *Gene* 283, 83-93.
4. Welin, A. et al. (2013) *PLoS One* 8, e69575.
5. van der Flier, L.G. et al. (2009) *Gastroenterology* 137, 15-7.
6. Liu, W. et al. (2007) *Histopathology* 51, 157-65.
7. Liu, W. et al. (2008) *Clin Cancer Res* 14, 1041-9.
8. Besson, D. et al. (2011) *Mol Cell Proteomics* 10, M111.009712.
9. Seko, N. et al. (2010) *Exp Ther Med* 1, 73-8.
10. van der Flier, L.G. et al. (2009) *Cell* 136, 903-12.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

M: Mouse

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