

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Frizzled-8 in direct ELISAs.
Source	Monoclonal Mouse IgG _{2A} Clone # 1022733
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Frizzled-8 Ala25-Pro172 Accession # Q9H461
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.

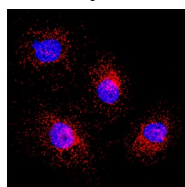
APPLICATIONS

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.

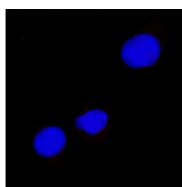
	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	Immersion fixed PC-3 human prostate cancer cell line

DATA

Immunocytochemistry



Positive (PC-3 cells)



Negative (U937 cells)

Frizzled-8 in PC-3 Human Cell Line. Frizzled-8 was detected in immersion fixed PC-3 human prostate cancer cell line (positive staining) and U937 human histiocytic lymphoma cell line (negative control) using Mouse Anti-Human Frizzled-8 Monoclonal Antibody (Catalog # MAB6129) at 8 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. Staining was performed using our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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

Frizzled-8 is one of at least ten seven-transmembrane (7TM) glycoproteins of the Frizzled family of Wnt receptors (1-2). Frizzled proteins are thought to be G-protein-coupled (1). Wnt engagement, with low density lipoprotein receptor-related proteins LRP-5 or LRP-6 acting as co-receptors, stabilizes β -catenin and promotes gene transcription that is important in development and tissue maintenance (1). Human Frizzled-8 cDNA encodes 694 amino acids (aa) including a 27 aa signal peptide, a 247 aa extracellular domain (ECD), the 7TM region (aa 276-605), and a C-terminal cytoplasmic domain with a PDZ binding motif (aa 606-694) (2). The ECD includes a cysteine-rich region (CRD, aa 30-151) that binds Wnts and is highly conserved among Frizzleds, and a linker region. Within aa 28-172, human Frizzled-8 shares 99%, 99%, 90% and 85% aa identity with mouse, rat, *Xenopus* and zebrafish Frizzled-8, respectively. It also shares 82% aa identity with human Frizzled-5. Frizzleds can form homodimers or selective hetero-oligomers with other family members, which can involve the TM regions and possibly the CRD (1, 3). During mouse development, Frizzled-8 is expressed in tissues that are important for organizing the anterior-posterior axis (4). Interactions of Frizzled-8 with several non-Wnt ligands have been identified. Interaction with Frizzled-8 and LRP-6 allows R-spondins to activate β -catenin signaling pathways, while interaction with IGFBP-4 (insulin-like growth factor binding protein (4) or CTGF (connective tissue growth factor) inhibits Wnt signaling (5-7). These ligands bind the extracellular CRD of Frizzled-8, blocking Wnt binding. The recombinant Frizzled-8 CRD has also been used to block Wnt signaling and inhibit growth of teratocarcinomas (5-10).

References:

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