Human Fucosyltransferase 11/FUT11 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF5964

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FUT11 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) FUT3, rhFUT5, and rhFUT8 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Fucosyltransferase 11/FUT11 Gly25-Leu492 Accession # AAH36037
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

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	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Fucosyltransferase 11/FUT11 (Catalog # 5964-GT), see our available Western blot detection antibodies

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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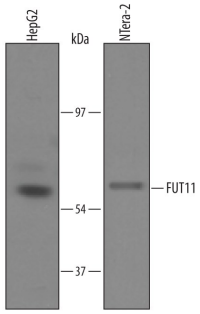
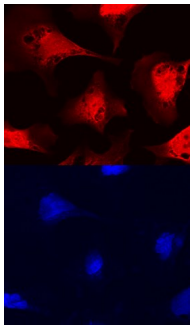
DATA

Western Blot



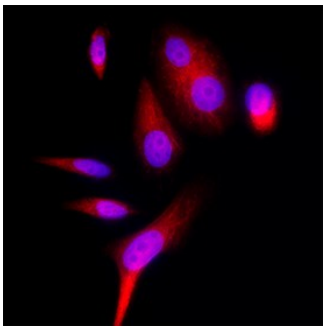
Detection of Human Fucosyltransferase 11/FUT11 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line and NTera-2 human testicular embryonic carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Human Fucosyltransferase 11/FUT11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5964) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Fucosyltransferase 11/FUT11 at approximately 56 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Immunocytochemistry



Fucosyltransferase 11/FUT11 in NTera-2 Human Cell Line. Fucosyltransferase 11/FUT11 was detected in immersion fixed NTera-2 human testicular embryonic carcinoma cell line using Human Fucosyltransferase 11/FUT11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5964) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panel; Catalog # NL010) and counterstained with DAPI (blue, lower panel). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunocytochemistry



Detection of Fucosyltransferase 11/FUT11 in PC-3 cells Fucosyltransferase 11/FUT11 was detected in immersion fixed PC-3 cells (Positive) using Sheep Anti-Human Fucosyltransferase 11/FUT11 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5964) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to Nuclear and cytoplasmic. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** • 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.

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BACKGROUND

Fucose is frequently found at terminal sites on various glycans and is essential for the generation of many sugar epitopes. Well-known fucose containing glycans include Lewis and ABO blood group antigens. Lewis epitopes are key elements involved in leukocyte homing and extravasation process, thus are essential for lymphocyte maturation and natural defense functions (1). O-fucosylation on Notch receptor is found to be essential for its signaling function (2). So far, 11 carbohydrate specific fucosyltransferases are found in humans (3). FUT1 and FUT2 are α1-2 fucosyltransferases and are responsible for ABO blood group antigen synthesis (4). FUT3, FUT4, FUT5, FUT6, FUT7, and FUT9 are α1-3/4 fucosyltransferases and are responsible for Lewis antigen generation (5). FUT10 and FUT11 are newly cloned α1-3 fucosyltransferases that are distinct from the α1-3/4 fucosyltransferase subfamily and are able to introduce fucose to the innermost core GlcNAc of the N-glycan on conalbumin glycopeptides and biantennary N-glycan acceptors but not onto short lactosaminyl acceptor substrates (6). Predicted as a type II transmembrane protein and a Golgi resident enzyme, the exact function of this enzyme needs to be further characterized.

References:

1. Weston, B.W. *et al.* (1992) J. Biol.Chem. **267**:4152.
2. Stahl, M. *et al.* (2008) J. Biol.Chem. **283**:13638.
3. Becker, D.J. *et al.* (2003) Glycobiology **13**:41R.
4. Kelly, R.J. *et al.* (1995) J. Biol.Chem. **270**:4640.
5. Weston, B.W. *et al.* (1992) J. Biol.Chem. **267**:24575.
6. Mollicone, R. *et al.* (2009) J. Biol. Chem. **284**:4723.

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