

ZYMED[®] Laboratories

invitrogen immunodetection

Qty: 100µg/400 µL

Rabbit anti-Frizzled-2

Catalog No. 38-4700

Lot No.

Rabbit anti-Frizzled-2

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.380

IMMUNOGEN

Synthetic peptide derived from the N-terminal region of human and mouse Frizzled-2 (FZD2).

SPECIFICITY

This antibody is specific for human and mouse FZD2. On Western blots, it identifies a band at ~85 kDa.

REACTIVITY

Reactivity has been confirmed with human CaCO₂, PC-3, SKOV3, SW480, HepG2 and HEK293 cell lysates by Western blotting, and with HepG2 cells by immunoprecipitation. Based on amino acid sequence homology, reactivity with mouse is also expected.

Sample	Western Blotting	Immunoprecipitation
Human	+++	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Immunoprecipitation: 7 µg/reaction

Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

www.invitrogen.com

Invitrogen Corporation • 1600 Faraday Avenue • Carlsbad • CA 92008 • Tel: 800.955.6288 • E-mail: tech_support@invitrogen.com

PIN: 31689

Rev. 6/07

DCC-06-0084

Copyright 2005, Zymed Laboratories

BACKGROUND

Wnt-Frizzled signaling is important for early development, regulating cell fate, polarity, differentiation, and migration¹⁻³. The frizzled gene, originally identified in *Drosophila*, is involved in the development of tissue polarity⁴. The Frizzled proteins contain seven transmembrane domains, a cysteine-rich domain in the extracellular region and a C-terminal Ser/Thr-xxx-Val motif, and they function as receptors for Wnt^{5,6}.

Human Frizzled-2 (FZD2)⁷ is expressed in adult heart and fetal brain, lung and kidney⁵. FZD2 activation leads to the release of β/γ subunit complexes from heterotrimeric G-proteins (presumably Gao and Gat) to activate phospholipase C and other effectors to stimulate a mobilization of intracellular Ca^{++} ⁸⁻¹². This does not involve the activation of the canonical WNT- β -catenin pathway. FZD2 can also signal via the G-protein Gt2, transducin, a G-protein prominent in photo-transduction in the eye, to cyclic GMP phosphodiesterase¹³⁻¹⁵. The calculated molecular weight of human FZD2 is ~ 63kDa (length =565 aa) or ~ 71kDa (length = 641 aa). The observed molecular weight of ~ 85 kDa may be due to post-translational modifications such as glycosylation, which is predicted in the amino acid sequence.

REFERENCES

1. Cadigan KM and Nusse R. *Genes Dev* 11:3286-3305, 1997
2. Cox RT and Peifer M. *Curr Biol* 8:R140-144, 1998
3. Moon RT, et al. *Trends Genet* 13:157-162, 1997
4. Wang Y, et al. *J Biol Chem* 271:4468-4476, 1996
5. Sagara N, et al. *Biochem Biophys Res Commun* 252:117-122, 1998
6. Yang-Snyder J, et al. *Curr Biol* 6:1302-1306, 1996
7. Zhao Z, et al. *Genomics* 27:370-373, 1995
8. Kuhl M, et al. *J Biol Chem* 275:12701-12711, 2000a
9. Kuhl M, et al. *Trends Genet* 16:279-283, 2000b
10. Liu X, et al. *PNAS* 96:14383-14388, 1999
11. Sheldahl LC, et al. *Curr Biol* 9:695-698, 1999
12. Slusarski DC, et al. *Nature* 390:410-413, 1997
13. Ahumada A, et al. *Science* 298:2006-2010, 2002
14. Malbon CC. *Front Biosci* 9:1048-1058, 2004
15. Wang HY. *Front Biosci* 9:1043-1047, 2004

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

Conjugate	ZyMAX[™] Goat x Rabbit IgG (H+L)	ZyMAX[™] Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy [™] 3	81-6115	81-6515
Cy [™] 5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

Zymed[®] and ZyMAX[™] are trademarks of Zymed Laboratories Inc. Cy[™] and Sepharose[®] are trademarks of Amersham Biosciences Ltd.

For Research Use Only

AL040616

www.invitrogen.com

Invitrogen Corporation • 1600 Faraday Avenue • Carlsbad • CA 92008 • Tel: 800.955.6288 • E-mail: tech_support@invitrogen.com

PIN: 31689

Rev. 6/07

DCC-06-0084

Copyright 2005, Zymed Laboratories