

Duffy (F-20): sc-27817

BACKGROUND

Duffy protein (CD234) is the receptor for the human malarial parasite *Plasmodium vivax*, simian malarial parasite *Plasmodium knowlesi*, and can bind chemokines. Duffy is an acidic glycoprotein that carries antigenic determinants of the Duffy blood group system, which consists of four alleles, five phenotypes and five antigens. Duffy protein is detectable in endothelial cells of postcapillary venules, epithelial cells of kidney collecting ducts, lung alveoli, thyroid, and Purkinje cells in the cerebellum.

REFERENCES

1. Chaudhuri, A., Polyakova, J., Zbrzezna, V., Williams, K., Gulati, S. and Pogo, A.O. 1993. Cloning of glycoprotein D cDNA, which encodes the major subunit of the Duffy blood group system and the receptor for the *Plasmodium vivax* malaria parasite. *Proc. Natl. Acad. Sci. USA* 90: 10793-10797.
2. Hadley, T.J., Lu, Z.H., Wasniowska, K., Martin, A.W., Peiper, S.C., Hesselgesser, J. and Horuk, R. 1994. Postcapillary venule endothelial cells in kidney express a multispecific chemokine receptor that is structurally and functionally identical to the erythroid isoform, which is the Duffy blood group antigen. *J. Clin. Invest.* 94: 985-991.
3. Chaudhuri, A., Nielsen, S., Elkjaer, M.L., Zbrzezna, V., Fang, F. and Pogo, A.O. 1997. Detection of Duffy antigen in the plasma membranes and caveolae of vascular endothelial and epithelial cells of nonerythroid organs. *Blood* 89: 701-712.
4. Choe, H., et al. 2005. Sulphated tyrosines mediate association of chemokines and *Plasmodium vivax* Duffy binding protein with the Duffy antigen/receptor for chemokines (DARC). *Mol. Microbiol.* 55:1413-1422.
5. LocusLink Report (LocusID: 2532). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Darc (mouse) mapping to 1 H3.

SOURCE

Duffy (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Duffy of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27817 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Duffy (F-20) is recommended for detection of Duffy (also designated CD234) of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

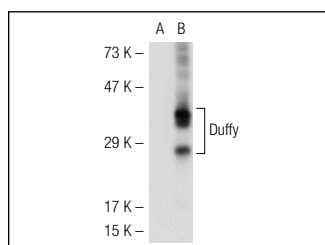
Molecular Weight of Duffy: 35-45 kDa.

Positive Controls: Duffy (m): 293T Lysate: sc-119861.

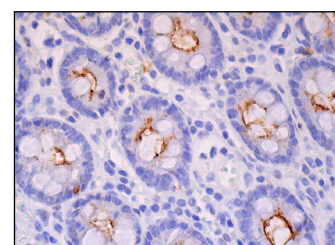
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Duffy (F-20): sc-27817. Western blot analysis of Duffy expression in non-transfected: sc-117752 (A) and mouse Duffy transfected: sc-119861 (B) 293T whole cell lysates.



Duffy (F-20): sc-27817. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing apical membrane staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.