

# Duffy (E-20): sc-27813

## 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., et al. 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., et al. 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., et al. 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. Addison, C.L., et al. 2004. Overexpression of the Duffy antigen receptor for chemokines (DARC) by NSCLC tumor cells results in increased tumor necrosis. BMC Cancer 4: 28.
5. Tournamille, C., et al. 2004. Sequence, evolution and ligand binding properties of mammalian Duffy antigen/receptor for chemokines. Immunogenetics 55: 682-694.
6. 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.
7. Hans, D., et al. 2005. Mapping binding residues in the *Plasmodium vivax* domain that binds Duffy antigen during red cell invasion. Mol. Microbiol. 55: 1423-1434.
8. LocusLink Report (LocusID: 2532). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: DARC (human) mapping to 1q23.2.

## SOURCE

Duffy (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Duffy of human 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-27813 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Duffy (E-20) is recommended for detection of Duffy (also designated CD234) of human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Duffy siRNA (h): sc-61882, Duffy shRNA Plasmid (h): sc-61882-SH and Duffy shRNA (h) Lentiviral Particles: sc-61882-V.

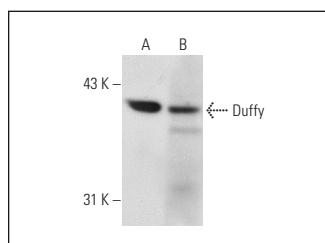
Molecular Weight of Duffy: 35-45 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or HEL 92.1.7 cell lysate: sc-2270.

## 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.

## DATA



Duffy (E-20): sc-27813. Western blot analysis of Duffy expression in HEL 92.1.7 (A) and K-562 (B) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.