



## CD155 (T-19): sc-27755

### BACKGROUND

CD155, a member of the immunoglobulin superfamily, acts as the human receptor for poliovirus (PV). All three serotypes of PV (PV1, 2 and 3) exhibit similar binding to CD155 in both its glycosylated and fully deglycosylated forms, indicating they utilize a common mechanism for cell entry. Additionally, CD155 undergoes cell-matrix contacts by binding to the matrix protein vitronectin. Along with the receptor form, three soluble isoforms,  $\alpha$ ,  $\beta$  and  $\gamma$ , also exist in human serum and cerebrospinal fluid, and CD155 mRNAs are highly expressed in liver tissue. The presence of soluble CD155 reduces poliovirus entry mediated by the membrane-bound receptor, implying an important role for these soluble forms in cellular function.

### REFERENCES

1. Ravens, I., Seth, S., Forster, R., and Bernhardt, G. 2003. Characterization and identification of Tage4 as the murine orthologue of human poliovirus receptor/CD155. *Biochem. Biophys. Res. Commun.* 312: 1364-1371.
2. He, Y., Mueller, S., Chipman, P.R., Bator, C.M., Peng, X., Bowman, V.D., Mukhopadhyay, S., Wimmer, E., Kuhn, R.J., and Rossmann, M.G. 2003. Complexes of poliovirus serotypes with their common cellular receptor, CD155. *J. Virol.* 77: 4827-4835.
3. Mueller, S. and Wimmer, E. 2003. Recruitment of nectin-3 to cell-cell junctions through trans-heterophilic interaction with CD155, a vitronectin and poliovirus receptor that localizes to  $\alpha(v)\beta3$  integrin-containing membrane microdomains. *J. Biol. Chem.* 278: 31251-21560.
4. Baury, B., Masson, D., McDermott, B.M. Jr., Jarry, A., Blottiere, H.M., Blanchardie, P., Laboisse, C.L., Lustenberger, P., Racaniello, V.R., and Denis, M.G. 2003. Identification of secreted CD155 isoforms. *Biochem. Biophys. Res. Commun.* 309: 175-182.
5. Kakunaga, S., Ikeda, W., Shingai, T., Fujito, T., Yamada, A., Minami, Y., Imai, T., and Takai, Y. 2004. Enhancement of serum- and platelet-derived growth factor-induced cell proliferation by Necl-5/Tage4/poliovirus receptor/CD155 through the Ras-Raf-MEK-ERK signaling. *J. Biol. Chem.* 279: 36419-36425.
6. Hirota, T., Irie, K., Okamoto, R., Ikeda, W., and Takai, Y. 2005. Transcriptional activation of the mouse Necl-5/Tage4/PVR/CD155 gene by fibroblast growth factor or oncogenic Ras through the Raf-MEK-ERK-AP-1 pathway. *Oncogene* 24: 2229-2235.
7. Tomasec, P., Wang, E.C., Davison, A.J., Vojtesek, B., Armstrong, M., Griffin, C., McSharry, B.P., Morris, R.J., Llewellyn-Lacey, S., Rickards, C., Nomoto, A., Sinzger, C., and Wilkinson, G.W. 2005. Downregulation of natural killer cell-activating ligand CD155 by human cytomegalovirus UL141. *Nat. Immunol.* 6: 181-188.

### CHROMOSOMAL LOCATION

Genetic locus: PVR (human) mapping to 19q13.2; Pvr (mouse) mapping to 7 A2-B1.

### SOURCE

CD155 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CD155 of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27755 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

CD155 (T-19) is recommended for detection of precursor and mature CD155 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of CD155: 70 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or MIA PaCa-2 cell lysate: sc-2285.

### 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) 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.

### 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.