



MONOCLONAL ANTIBODY

For research use only. Not for clinical diagnosis.

Catalog No. NCG-M01

Anti Vpr (HIV-1)

BACKGROUND

Viral Protein R (Vpr), an accessory gene of human immunodeficiency virus type 1 (HIV-1), encodes a virion-associated nuclear protein with a variety of biological functions. Forced expression of Vpr induces cell cycle abnormalities at the G2/M phase, apoptosis and nuclear transportation of the pre-integration complex. Vpr is a transacting factor, and exogenously added Vpr can also induce apoptosis. It has been reported that Vpr is present in blood and cerebrospinal fluids of HIV-1 positive patients and also proposed that Vpr is linked with functional abnormality of central nervous system of the patients.

| | |
|-------------------------|--|
| Product type | Primary antibodies |
| Immunogen | Vpr peptide |
| Raised in | Mouse |
| Myeloma | P3U1 |
| Clone number | 8D1 |
| Isotype | IgG2a, k |
| Host | - |
| Source | Serum free culture supernatant |
| Purification | Protein G |
| Buffer | PBS containing 0.02% NaN ₃ as a preservative |
| Concentration | 1 mg / mL |
| Volume | 50 uL/ 100 uL |
| Label | Unlabeled |
| Specificity | Vpr |
| Cross reactivity | - |
| Storage | Store below -20°C (below -70°C for prolonged storage) Aliquot to avoid cycles of freeze/thaw. |
| Other | Data Link : UniProtKB/Swiss-Prot G9E2V1 |

Application notes

Recommended dilutions

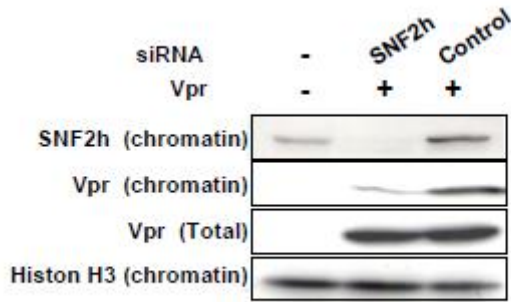
- **Western blotting:** 1/200 - 1/100 (Ref.1, Fig. 1)
- **Fluorescence - activated cell sorter:** 1/500 (Ref. 6)
- **Immunoprecipitation:** 5 ug/Vpr 20 ng

Other applications have not been tested.

Optimal dilutions/concentrations should be determined by the end user.

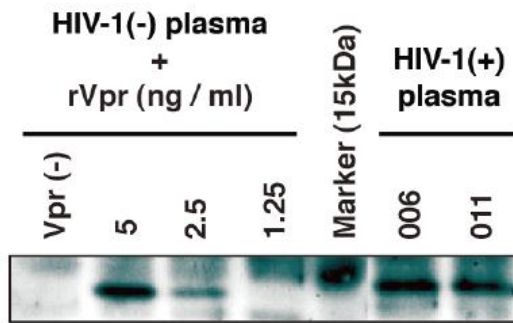
References

- 1) Daiki Taneichi, *et al*, Identification of SNF2h, a Chromatin-Remodeling Factor, as a Novel Binding Protein of Vpr of Human Immunodeficiency Virus Type 1 *J Neuroimmune Pharmacol* (2011) 6:177.187 **PMID: 21519849**
- 2) Mari Shimura, *et al*, Epigenetic displacement of HP1 from heterochromatin by HIV-1 Vpr causes premature sister chromatid separation *J Cell Biol.* 2011 Sep 5; 194(5):721-35. Epub 2011 Aug 29. **PMID: 21875947**
- 3) Tram N. Q. Pham, *et al*, Modulation of NKG2D-Mediated Cytotoxic Functions of Natural Killer Cells by Viral Protein R from HIV-1 Primary Isolates: *J.Virol.* 85: 12254-12261, 2011 **PMID: 21957298**
- 4) Shigeki Hoshino, *et al*, HIV-1 Vpr induces TLR4/MyD88-mediated IL-6 production and reactivates viral production from latency *J Leukoc Biol.* 87:1133-1143, 2010 **PMID: 20145198**
- 5) Hoshino, S., *et al*, Vpr in plasma of HIV-1-positive patients is correlated with the HIV-1 RNA titers. *AIDS Res. Hum. Retrovir.* 23, 391-397, 2007. **PMID: 17411372**
- 6) Jonathan Richard, *et al*, Viral protein R upregulates expression of ULBP2 on uninfected by stander cells during HIV-1 infection of primary CD4+ T lymphocytes. *Virology.* 443 : 248-256, 2013 **PMID: 23726848**



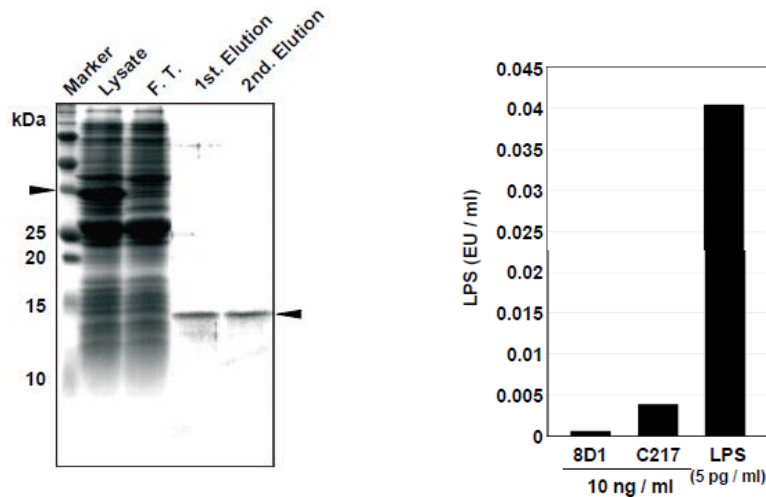
lane 1 vector control
lane 2 pCMV-Vpr with SNF2h siRNA
lane 3 pCMV-Vpr with control siRNA.

Fig.1 Western blotting with 8D1 antibody using whole cell extracts of Chromatin fraction. Chromatin fraction was prepared from HEK293T cells to which pCMV-Vpr with control and SNF2h siRNAs were transfected. (Ref. 1 Fig. 3)



lane 1 rVpr (-)
lane 2 5 ng of standard rVpr
lane 3 2.5 ng of standard rVpr .
lane 4 1.25 ng of standard rVpr .
lane 5 Molecular marker.
lane 6 HIV-1-positive plasma #006
lane 7 HIV-1-positive plasma #011

Fig.2 Detection (or IP-WB analysis) of Vpr in plasma of HIV-1-positive patients. A definite signal of the 14-kDa protein was observed in patients #006 and #011 (Ref. 5 Fig. 1)



1st. Elution: Glutathione column
2nd. Elution: 8D1 affinity column

8D1: anti-Vpr monovlonal antibody Cat# NCG-M01
C217: anti-Vpr monovlonal antibody

Fig.3 LPS-free Vpr protein purification using a glutathione column and an affinity column with anti-Vpr antibody (8D1) (Ref. 4 Fig. 1)

RELATED PRODUCTS:

| Maker | Product Name | Cat# |
|-------|--|------------------------|
| BAM | Anti HIV-1 Reverse Transcriptase Polyclonal Antibody | 65-001, 65-002, 65-003 |
| BAM | Anti HIV-1 Gag p15 Polyclonal Antibody | 65-011, 65-012 |
| BAM | Anti HIV-1 Gag p17 Polyclonal Antibody | 65-008, 65-009, 65-010 |
| BAM | Anti HIV-1 Gag p24 Polyclonal Antibody | 65-004, 65-005, 65-006 |
| BAM | Anti HIV-1 Gag p24 Polyclonal Antibody (biotin-conjugated IgG) | 65-021 |
| BAM | Anti HIV-1 Gag p55 Polyclonal Antibody | 65-013, 65-014 |
| BAM | Anti HIV-1 Nef Polyclonal Antibody | 65-015, 65-016, 65-017 |
| BAM | HIV-1 Reverse Transcriptase | 05-001, 05-002 |
| BAM | HIV-1 Gag p15 | 05-007, 05-008 |
| BAM | HIV-1 Gag p17 | 05-003, 05-004 |
| BAM | HIV-1 Gag p24 | 05-005, 05-006 |
| BAM | HIV-1 Gag p55 | 05-009, 05-010 |
| BAM | HIV-1Nef | 05-011, 05-012 |

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