

Monoclonal neutralizing anti-HIV-1 gp41

Product reference: DDX1306

Description

HIV-1-gp41 is a subunit of the envelope protein complex of HIV. HIV-1-gp41 is responsible for the fusion between the viral and the cell membranes and thus represents a target for HIV vaccines. Trimeric Env is composed of gp120, which is non-covalently associated with the membrane-anchored fusion protein gp41. HIV-1 gp120 binding to CD4 and co-receptor (CCR5 or CXCR4) induces conformational changes, resulting in gp41 exposure and in the production of fusion-intermediate conformation of gp41 (HR1 and HR2). 3 neutralizing anti-gp41 monoclonal antibodies were selected from mice immunized with 293T cells stably transfected with a construct expressing HR1 plus HR2. (*Dawood R et al, AIDS. 27(5):717-730, 2013*).

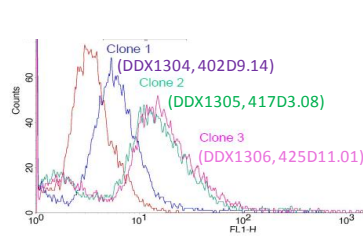
Clone: 425D11.12 (referred to as clone 3 in the article)
Species: mouse
Specificity: Conformational epitope formed by aas 531-560 (HR1) and 623-661 (HR2)
Immunogen: HR1-PID-HR2-transfected HEK 293 cells (HIV-1, 92BR025, Clade C)
Isotype: IgG1
Purification: QMA Hyper D ion exchange chromatography
Formulation/size: **Purified:** 100 µg in 200 µl / 50 µg in 100 µl Tris-NaCl pH 8
Coupled: 100 µg in 200 µl / 50 µg in 100 µl PBS 50% glycerol

Available formats:

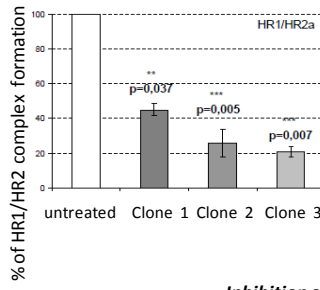
Reference N°		Format	Application tested
50µg	100µg		
DDX1306P-50	DDX1306P-100	Purified	Flow cytometry, IF, Neutralization, Cell-coated ELISA, Inhibition of syncytia formation, Blocking of HR1/HR2 complex formation, Western-Blot
DDX1306A488-50	DDX1306A488-100	Alexa-fluor@488 (on request)	
DDX1306A546-50	DDX1306A546-100	Alexa- fluor@546 (on request)	
DDX1306A647-50	DDX1306A647-100	Alexa- fluor@647 (on request)	
DDX1306B-50	DDX1306B-100	Biotin (on request)	

Other clones available on request

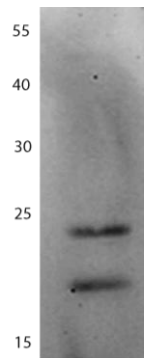
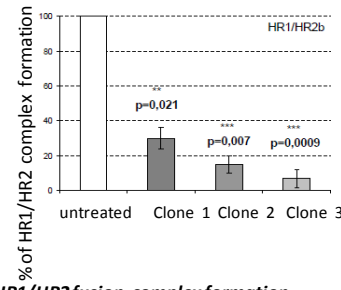
Applications tested: *Dawood R et al, AIDS. 27(5):717-730, 2013*



FACS staining of HEK293-gp41™ cell line



Inhibition of HR1/HR2 fusion complex formation



WB analysis (DDX1306) of a purified multi-epitopic HIV antigen: (HIV-1-Tat 1-20, 44-61/pol150-190/gag158-186/env296-323,577-609; *Rahimi et al, 2015*). The expected length of the HIV protein is 20KDa. The second signal might represent a by product.

Strain (Tropism, Clade)	Clone 1		Clone 2		Clone 3		D5	NC-1	4E10	2F5				
LAI (CXCR4; B)	0.78	0.16	12.5	3.1	1.5	0.31	>100	25	>100	25	6.25	3.1	12.5	6.25
BAL (CCR5; B)	12.5	3.1	12.5	6.25	25	12.5	n.d.	n.d.	n.d.	25	12.5	50	25	25
92UG029 (CXCR4; A)	1.5	0.31	1.5	0.31	0.78	0.16	50	12.5	12.5	3.1	50	12.5	25	6.25
5F162 (CCR5; B)	100	25	10	1.5	100	12.5	>100	50	>100	50	>100	50	>100	50
QHO692 (CCR5; B)	>100	10	100	10	>100	100	n.d.	n.d.	n.d.	>100	25	>100	50	50
92US660 (CCR5; B)	>100	50	>100	25	>100	50	>100	50	>100	12.5	>100	50	>100	50
93BR025 (CCR5; B)	3.1	1.5	1.5	0.78	0.78	<0.78	n.d.	n.d.	n.d.	3.1	0.78	3.1	1.5	1.5
92BR025 (CCR5; C)	6.25	3.1	0.78	<0.78	1.5	0.78	>100	25	>100	12.5	6.25	3.1	12.5	6.25
92UG001 (CCR5/CXCR4; D)	3.1	0.78	3.1	0.31	0.78	0.06	25	12.5	12.5	6.25	25	12.5	12.5	3.1
HIV-1 G3 (CCR5; G)	12.5	3.1	12.5	3.1	6.25	1.5	50	25	12.5	3.1	6.25	3.1	12.5	6.25

The table contains the antibodies concentration in µg/ml of the three purified mAbs used to obtain a neutralization of HIV infection (INabs) at 50% or 90% as described in the method section. D5, NC-1, 4E10 and 2F5 mAbs were used as controls. (n.d. not done). The MAb neutralization titers have been color-coded as follows: numbers with a white background indicate an IC₅₀ of >12.5 µg/ml, numbers with a medium grey background indicate 3.1 µg/ml > IC₅₀ > 12.5 µg/ml and numbers with a dark grey background indicate an IC₅₀ of < 3.1 µg/ml.

Neutralizing activities on laboratory strains and primary HIV-1 strains

Usage recommendation: *This monoclonal antibody may be used between 5-25 µg/ml.
 *Optimal dilution should be determined by each laboratory for each application.
 *Coupled antibody: to maintain RT before use.

Aliquot storage conditions: -20°C. KEEP CONTENTS STERILE: no preservative.
Purified antibodies: avoid repeated freeze/thaw cycles.
Coupled antibodies: glycerol protects from freezing.

Not for use in Humans. For research purpose only