



Monoclonal Anti-human NRG1/HRG1 Antibody

ORDERING INFORMATION

Catalog Number: MAB377

Clone: 147724

Lot Number: GSI02

Size: 500 µg

Formulation: 0.2 µm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

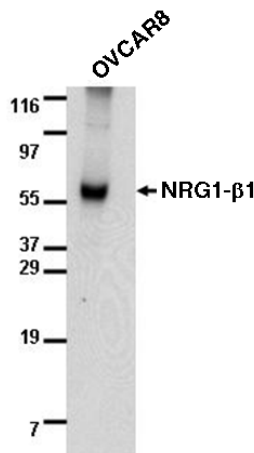
Specificity: human NRG1

Immunogen: *E. coli*-derived rhNRG1-β1

Ig class: mouse IgG_{2b}

Recommended Application:
Western blot

Other Application:
Direct ELISA



Detection of human NRG1-β1 with MAB377.

Lysates were prepared from OVCAR8 cells in non-reducing sample buffer, resolved by SDS-PAGE (10 µg total protein/lane), and transferred to an Immobilon-P membrane. Use of this antibody under reducing conditions is not recommended. The blot was developed with 2 µg/mL MAB377 and chemiluminescent detection substrate.

Background

Neuregulin-1 (NRG1) is alternatively known as Heregulin (HRG) and exists as a type I membrane protein or as a proteolytically released soluble protein. At least 10 isoforms are produced by alternative splicing.

Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, *E. coli*-derived, recombinant human Neuregulin 1 isoform beta 1 extracellular domain (rhNRG1-β1; aa 2 - 246; Accession # Q02297). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Formulation

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Reconstitution

Reconstitute with sterile PBS. If 1 mL of PBS is used, the antibody concentration will be 500 µg/mL.

Storage

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a manual defrost freezer for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity

This antibody detects rhNRG1-β1 in direct ELISAs and Western blots. In direct ELISAs, this antibody showed no cross-reactivity with the EGF-like domains of rhNRG1-β1 (aa 176 - 246) or rhNRG1-α (aa 177 - 241). Therefore, this antibody recognizes an epitope located within the aa segment 2 - 176 N-terminal to the EGF-like domain. This segment occurs in all NRG1-α, β and γ isoforms and in NDF43 and glial growth factor (GGF). It is absent from the NRG1 gene products, GGF2 and SMDF.

Applications

Western blot - This antibody can be used at 2 µg/mL with the appropriate secondary reagents to detect various NRG1 beta 1 isoforms in cell or tissue extracts. Refer to <http://www.RnDSystems.com/go/WBCeLLysates> for detailed procedures for preparing lysates and Western blotting. The specific buffers are listed below.

Blotting Buffer	Blocking Solution	Antibody Solution
25 mM Tris, pH 7.4	5% nonfat dry milk	5% nonfat dry milk
0.15 M NaCl	in Blotting Buffer	in Blotting Buffer
0.05% Tween® 20		

Direct ELISA - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human NRG1. The detection limit for rhNRG1-β1 is approximately 3 ng/well.

Optimal dilutions should be determined by each laboratory for each application.

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