COMPOUND DETAILS NNC0124-0226

Anti-IGF1R mAb 226



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Anti-IGF1R mAb 226



Insulin and insulin-like growth factor 1 (IGF1) are two closely related proteins and share similarities in both primary and tertiary structure. The homology is paralleled by similarities in the structures of their receptors, the insulin receptor (InsR) and the IGF1 receptor (IGF1R), which belong to the same family of receptor tyrosine kinases.

When studying the InsR and IGF1R is it therefore important to use specific antibodies that does not cross-react with both receptors. NNC0124-0226 is a highly specific IGF1R monoclonal antibody that lack cross-reactivity to the InsR. NNC00124-0226 is an IgG4 monoclonal antibody directed against alfa-subunit of the IGF1R.

Also, unlike earlier monoclonal antibodies reported in the literature, this antibody shows cross-species reactivity to the extracellular domains of mouse, rat, pig, and human receptors, indicating that it binds conserved epitopes. Furthermore, the antibodies work well in several different assay formats and therefore provide a new tool to study InsR and IGF1R biology with translation across several species and experimental model systems. NNC0124-0226 differ in one amino acid compared to the mAb 227 in the reference by Ørstrup *et al* 2019 listed in the reference section and therefore displays the same specificity as mAb 227.

Category	Tool antibodies
ID	NNC0124-0226
Amount pr. vial	100 ug

Calculated properties

The antibodies are of very high purity and have a minimal amount of aggregates as determined by SEC-HPLC. The isotype control (NNC9416-0001) is anti-trinitrophenol (aTNP), the isotype control standard used in most in vitro and in vivo applications since the antigen is not considered present in mammals.

Property	NNC0124-0226	Isotype control (NNC9416-0001)
Production host	HEK cells	CHO cells
Fc subtype	IgG4	hzIgG4
Antigen	Human IGF1 receptor	2,4,6-trinitrophenol (TNP)
Original species	Human/rabbit (rabbit variable domains)	-
Buffer composition	PBS, pH 7.4 with 0.02% Na-azide	PBS, pH 7.4 with 0.02% Na-azide
Concentration	0.99 mg/mL	0.93 mg/mL
Theoretical mass	144349.8 Da	144774.3 Da
Endotoxin	<0.06 EU/mg	<0.06 EU/mg

CHO: Chinese hamster ovary; EU: endotoxin unit; HEK: human embryonic kidney; PBS: phosphate buffered saline; SEC: size exclusion chromatography

Calculated and experimental properties of NNC0124-0226 and the isotype control (NNC9416-0001).

In vitro data

NNC0124-0226 displays cross-species reactivity to the extracellular domains of mouse, rat, pig, and human insulin receptors (other species not tested), indicating that it binds conserved epitopes. Furthermore, the antibody works well in several different assay formats, see the table.

Application	Suitability
WB (only non-reduced)	+
Flow cytometry	+++
ELISA (tested as capture Ab in sandwich ELISA)	+++
Immunocytochemistry	+++
IP	+++
Tissue IP	+++
Immunohistochemistry on frozen section	Not tested
Species reactivity	
Human, mouse, rat, pig (other species not tested)	

ELISA: enzyme-linked immunosorbent assay; IP: immunoprecipitation; WB: Western blot



Reference Compound

The isotype control to NNC0124-0226 is NNC9416-0001. Please indicate (with a check mark at ‘Please add the reference compound if available) during your compound request if you would like to have NNC9416-0001 included in your shipment.

Compound handling instructions

We recommend to store the antibodies at minus 80C. Four weeks stability at 4C have been confirmed.

References

1. Ørstrup et al.
Cross-species reactive monoclonal antibodies against the extracellular domains of the insulin receptor and IGF1 receptor

J Immunol Methods. 2019;465:20-26

2. Hvid H et al.
Activation of insulin receptors and IGF-1 receptors in COLO-205 colon cancer xenografts by insulin and insulin analogue X10 does not enhance growth under normo- or hypoglycaemic conditions

Diabetologia. 2018;61(11):2447-2457

