

Tyro3 (B-4): sc-166360

BACKGROUND

Receptor tyrosine kinases (RTKs) represent an important class of transmembrane signaling molecules. Binding of the extracellular domain of an RTK to its cognate ligand leads to receptor dimerization and the activation of the intrinsic tyrosine kinase activity of its intracellular kinase domain. The Axl/UFO subfamily of receptor tyrosine kinases is comprised of members Tyro3 (also referred to as BYK, Brt, Dtk, RSE, Tif or Sky), Axl (also called Tyro7 or UFO) and Mer (also called Nyk, c-Eyk and Tyro12). Members of this family have a common molecular structure which contains an N-terminal extracellular domain comprised of two Ig domains, two FNIII domains and a membrane spanning single helix followed by the cytoplasmic tyrosine kinase domain. These RTKs are functionally significant in spermatogenesis, immunoregulation and phagocytosis. Tyro3, Axl and Mer are widely expressed in adult tissues with their expression most abundant in brain, testis, lymphatic and vascular tissue. Tyro3 has been shown to undergo posttranslational modifications including both tyrosine phosphorylation as well as glycosylation. Two proteins, protein S and Gas6, have been proposed as ligands for the Axl/UFO family of receptors. Both function as anti-coagulants through an unknown mechanism. Gas6 was cloned as a growth arrest-specific gene, while Protein S is an abundant serum protein which is thought to act by indirectly inhibiting proteases involved in the coagulation response.

REFERENCES

1. Janssen, J.W., et al. 1991. A novel putative tyrosine kinase receptor with oncogenic potential. *Oncogene* 6: 2113-2120.
2. Schlessinger, J., et al. 1992. Growth factor signaling by receptor tyrosine kinases. *Neuron* 9: 383-391.

CHROMOSOMAL LOCATION

Genetic locus: TYRO3 (human) mapping to 15q15.1; Tyro3 (mouse) mapping to 2 E5.

SOURCE

Tyro3 (B-4) is a mouse monoclonal antibody raised against amino acids 781-890 mapping at the C-terminus of Tyro3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tyro3 (B-4) is available conjugated to agarose (sc-166360 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166360 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166360 PE), fluorescein (sc-166360 FITC), Alexa Fluor® 488 (sc-166360 AF488), Alexa Fluor® 546 (sc-166360 AF546), Alexa Fluor® 594 (sc-166360 AF594) or Alexa Fluor® 647 (sc-166360 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166360 AF680) or Alexa Fluor® 790 (sc-166360 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

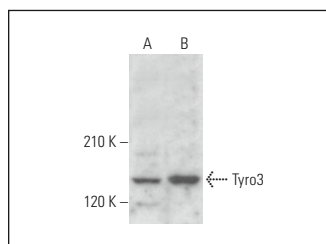
Tyro3 (B-4) is recommended for detection of Tyro3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tyro3 siRNA (h): sc-36438, Tyro3 siRNA (m): sc-36439, Tyro3 shRNA Plasmid (h): sc-36438-SH, Tyro3 shRNA Plasmid (m): sc-36439-SH, Tyro3 shRNA (h) Lentiviral Particles: sc-36438-V and Tyro3 shRNA (m) Lentiviral Particles: sc-36439-V.

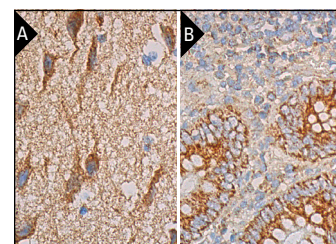
Molecular Weight of Tyro3: 120 kDa.

Positive Controls: F9 cell lysate: sc-2245, MH-S whole cell lysate: sc-364785 or mouse brain extract: sc-2253.

DATA



Tyro3 (B-4): sc-166360. Western blot analysis of Tyro3 expression in F9 (A) and MH-S (B) whole cell lysates.



Tyro3 (B-4): sc-166360. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells, glial cells and neuropil staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Park, M., et al. 2021. Circulating small extracellular vesicles activate TYRO3 to drive cancer metastasis and chemoresistance. *Cancer Res.* 81: 3539-3553.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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