Human/Mouse/Rat Park7/DJ-1 Antibody

Recombinant Monoclonal Mouse IgG_{2A} Clone # 925805R

Catalog Number: MAB39951

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat PARK-7 in Western blots. In sandwich immunoassays, it is specific for human PARK-7.
Source	Recombinant Monoclonal Mouse IgG_{2A} Clone # 925805R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*E. coli*-derived recombinant human PARK-7 Ala2-Asp189 Accession # Q99497
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

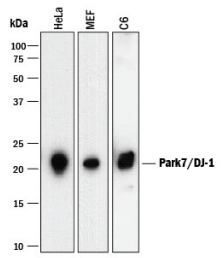
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Knockout Validated	Park7/DJ-1 is specifically detected in HEK293T human embryonic kidney parental cell line but is not detectable in Park7/DJ-1 knockout HEK293T cell line.	
ELISA	This antibody functions as an ELISA detection antibody for Human Park7//DJ-1 when paired with Mouse Anti-Human Park7/DJ-1 Monoclonal Antibody (Catalog # MAB39952). *This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Park7/DJ-1 DuoSet ELISA Kit (Catalog # DY3995) for convenient development of a sandwich ELISA.*	

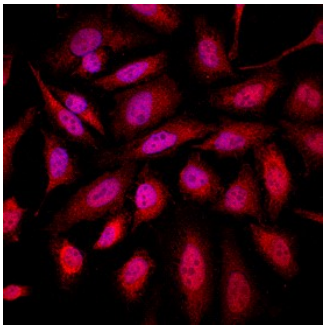
DATA

Western Blot



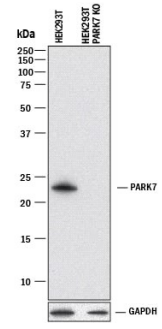
Detection of Human, Mouse, and Rat Park7/DJ-1 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, MEF mouse embryonic feeder cells, and C6 rat glioma cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse/Rat Park7/DJ-1 Monoclonal Antibody (Catalog # MAB39951) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Park7/DJ-1 at approximately 22 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



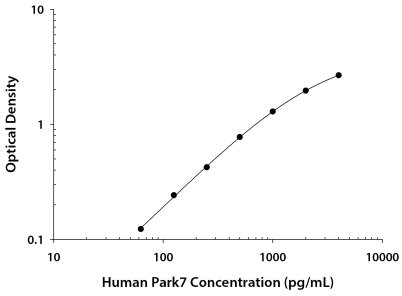
Park7/DJ-1 in HeLa Human Cell Line. Park7/DJ-1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human/Mouse/Rat Park7/DJ-1 Monoclonal Antibody (Catalog # MAB39951) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and nuclei. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Knockout Validated



Western Blot Shows Human Park7/DJ-1 Specificity by Using Knockout Cell Line. Western blot shows lysates of HEK293T human embryonic kidney parental cell line and Park7 knockout HEK293T cell line (KO). PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human/Mouse/Rat Park7/DJ-1 Monoclonal Antibody (Catalog # MAB39951) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Park7/DJ-1 at approximately 23 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in knockout HEK293T cell line. GAPDH (Catalog # MAB5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

ELISA



Human Park7/DJ-1 ELISA Standard Curve. Recombinant Human Park7/DJ-1 protein was serially diluted 2-fold and captured by Mouse Anti-Human Park7/DJ-1 Monoclonal Antibody (Catalog # MAB39952) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human/Mouse/Rat Park7/DJ-1 Monoclonal Antibody (Catalog # MAB39951) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

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Catalog Number: MAB39951

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Park7, also known as DJ-1, is a cytoplasmic protein that belongs to the ThiJ/Pfp1/DJ-1 superfamily of highly conserved proteins that function as protein chaperones, catalases, proteases and kinases. Park7 is widely expressed in the brain as well as in peripheral tissues. It exists as a homodimer that can be localized in the cytoplasm, nucleus and mitochondria. Park7 is a redox-sensitive protein that has been ascribed various functions including that as a redox sensor and antioxidant protein. Mutations in Park7 are associated with a small percentage of hereditary early onset Parkinson's disease. Human and mouse Park7 share 92% amino acid sequence identity.

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