Datasheet for ABIN2745558

anti-Poly-ADP-Ribose antibody

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Overview

Quantity:	50 µg
Target:	Poly-ADP-Ribose (PAR)
Reactivity:	Human, Drosophila melanogaster, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), Immunocytochemistry (ICC), Flow Cytometry (FACS), Immunohistochemistry (IHC)

Product Details

Immunogen:	Purified poly(ADP-ribose).
Clone:	10H
Isotype:	IgG3
Specificity:	Recognizes poly(ADP-ribose) synthesized by a broad range of PARPs (poly(ADP-ribose) polymerases), including human, mouse, rat or Drosophila PARP enzymes.
Cross-Reactivity:	Fruit Fly (Drosophila melanogaster), Human, Mouse (Murine), Rat (Rattus)
Purity:	>95 % (SDS-PAGE)

Target Details

Target:	Poly-ADP-Ribose (PAR)
Alternative Name:	Poly ADP-Ribose [PAR] (PAR Products)

Target Details

Background:	Processes such as transcription, repair and replication that require efficient DNA recognition are dependent on modulation of chromatin structure. Chromatin relaxation is a critical event that occurs during DNA repair and is associated with the negatively charged polymer of adenosine 5'-diphosphate (ADP)-ribose (PAR). PAR is synthesized from nicotinamide adenine dinucleotide (NAD+) by the poly(ADP-ribose) polymerase protein family (PARPs), of which PARP-1 (and to a lesser extent PARP-2) respond to DNA-strand breaks. PARP-1 is selectively activated by DNA strand breaks to catalyze the addition of long branched chains of PAR to a variety of nuclear proteins, most notably PARP itself. The amount of PAR formed in living cells with DNA damage is commensurate with the extent of the damage. Under DNA damage conditions, PAR undergoes a rapid turnover, with a half-life in the range of minutes, as PAR is rapidly hydrolyzed and converted to free ADP-ribose by the enzyme poly(ADP-ribose)glycohydrolase (PARG). PAR regulates not only cell survival and cell-death programmes, but also an increasing number of other biological functions with which novel members of the PARP family have been associated. These include transcriptional regulation, cell division, intracellular trafficking, inflammation and energy metabolism.

Application Details

Application Notes:	Application Notes: The monoclonal antibody 10H is directed against poly(ADP-ribose) (PAR). After massive DNA damage (e.g. gamma-irradiation or oxidative stress) PAR is detectable in the first 10 minutes and disappears later on. In keratinocytes the anti-PAR (10H) has been shown to detect UVB-induced apoptosis as early as 4 hours after irradiation, thus being superior to DNA laddering and the TUNEL assay. Due to the very large number of endonuclease-mediated DNA breaks in apoptosis, PARP (poly(ADP-ribose) polymerase) becomes strongly activated during the so-called execution phase. In the case of DNA damage-induced apoptosis, this represents a "second round" of PAR synthesis. PAR synthesized during apoptosis appears to be remarkably stable. PAR immunofluorescence appears at least as early during apoptosis as does the specific cleavage of PARP by caspase-3 and correlates well with other markers of apoptosis. anti-PAR (10H) was used in flow cytometry and a quantitative non-isotopic immuno-dot-blot method for the assessment of cellular poly(ADP-ribosyl)ation capacity.
Comment:	The monoclonal antibody 10H is directed against poly(ADP-ribose) (PAR). After massive DNA damage (e.g. gamma-irradiation or oxidative stress) PAR is detectable in the first 10 minutes and disappears later on. In keratinocytes the anti-PAR (10H) has been shown to detect UVB-induced apoptosis as early as 4 hours after irradiation, thus being superior to DNA laddering and the TUNEL assay. Due to the very large number of endonuclease-mediated DNA breaks in apoptosis, PARP (poly(ADP-ribose) polymerase) becomes strongly activated during the so-

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Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	Lot specific
Buffer:	Containing 50 mM HEPES, pH 7.4, 100 mM NaCl, 1 % BSA and 0.02 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Short Term Storage: -20°C Long Term Storage: -80°C Stable for at least 1 year after receipt when stored at -80°C.
Expiry Date:	12 months