Datasheet for ABIN967265

anti-XRCC4 antibody (C-Term, sumoLys210)

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Overview

Quantity:	0.1 mg
Target:	XRCC4
Binding Specificity:	C-Term, sumoLys210
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Application:	Immunohistochemistry (IHC)

Product Details

Immunogen:	Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to C-residues of human XRCC4(X-ray repair cross-complementing protein 4) Note: Antigen containing K210 amino group with the SUMO1 c-terminal 7-mer peptide bound: YQEQTGG

Target Details

Target:	XRCC4
Alternative Name:	XRCC4 (XRCC4 Products)
Background:	XRCC4 (X-ray repair cross-complementing protein 4) is involved in DNA nonhomologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination. XRCC4 binds to DNA and to DNA ligase IV (LIG4). The LIG4-XRCC4 complex is responsible for the NHEJ ligation step, and XRCC4 enhances the joining activity of LIG4. Binding of the LIG4-XRCC4 complex to DNA ends is dependent on the assembly of the DNA-dependent protein kinase

Target Details

	complex DNA-PK to these DNA ends. XRCC4 is a homodimer and homotetramer in solution. The homodimer associates with LIG4, and the LIG4-XRCC4 complex associates in a DNA-dependent manner with the DNA-PK complex formed by the Ku p70/p86 dimer (G22P1/G22P2) and PRKDC. XRCC4 seems to interact directly with PRKDC but not with the Ku p70/86 dimer. It interacts with XLF/Cernunnos. Interacts with APTX and APLF. Sumoylation at Lys-210 is required for nuclear localization and recombination efficiency. It has no effect on ubiquitination.
Pathways:	DNA Damage Repair, Production of Molecular Mediator of Immune Response

Application Details

Restrictions:	For Research Use only

Handling

Storage:	4 °C

Publications

Product cited in:	Durkin, Guo, Fryrear, Mihaylova, Gupta, Belgnaoui, Haoudi, Kupfer, Semmes: "HTLV-1 Tax oncoprotein subverts the cellular DNA damage response via binding to DNA-dependent protein kinase." in: **The Journal of biological chemistry**, Vol. 283, Issue 52, pp. 36311-20, (2008) (PubMed). Huston, Lynch, Mohamed, Collins, Hill, MacLeod, Krause, Baillie, Houslay: "EPAC and PKA allow cAMP dual control over DNA-PK nuclear translocation." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 105, Issue 35, pp. 12791-6, (2008) (PubMed).