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NRF2 (D1Z9C) XP® Rabbit mAb (Alexa Fluor® 647 Conjugate)


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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: FC-FP	Reactivity: H M Mk	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q16236	Entrez-Gene Id: 4780
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	NRF2 (D1Z9C) XP® Rabbit mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of total NRF2 protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala275 of human NRF2 protein.	
Product Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct flow cytometric analysis in mouse cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated NRF2 (D1Z9C) XP® Rabbit mAb #12721.	
Background	The nuclear factor-like 2 (NRF2) transcriptional activator binds antioxidant response elements (ARE) of target gene promoter regions to regulate expression of oxidative stress response genes. Under basal conditions, the NRF2 inhibitor INrf2 (also called KEAP1) binds and retains NRF2 in the cytoplasm where it can be targeted for ubiquitin-mediated degradation (1). Small amounts of constitutive nuclear NRF2 maintain cellular homeostasis through regulation of basal expression of antioxidant response genes. Following oxidative or electrophilic stress, KEAP1 releases NRF2, thereby allowing the activator to translocate to the nucleus and bind to ARE-containing genes (2). The coordinated action of NRF2 and other transcription factors mediates the response to oxidative stress (3). Altered expression of NRF2 is associated with chronic obstructive pulmonary disease (COPD) (4). NRF2 activity in lung cancer cell lines directly correlates with cell proliferation rates, and inhibition of NRF2 expression by siRNA enhances anti-cancer drug-induced apoptosis (5).	
Background References	1. Cullinan, S.B. et al. (2004) <i>Mol Cell Biol</i> 24, 8477-86. 2. Nguyen, T. et al. (2005) <i>J Biol Chem</i> 280, 32485-92. 3. Jaiswal, A.K. (2004) <i>Free Radic Biol Med</i> 36, 1199-207. 4. Suzuki, M. et al. (2008) <i>Am J Respir Cell Mol Biol</i> 39, 673-82. 5. Homma, S. et al. (2009) <i>Clin Cancer Res</i> 15, 3423-32.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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